

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2053.—Vol. XLIV.

LONDON, SATURDAY, DECEMBER 26, 1874.

WITH [SUPPLEMENT.] {PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
(SUCCESSOR TO JAMES CROFTS).
Established 1842.

BUSINESS transacted in every description of BRITISH and FOREIGN Stocks and Shares, and in all COLLIERY and LANE Shares.
SPECIAL BUSINESS in shares not having a general market value.

SPECIAL DEALINGS in the following. Buyers or Sellers will find it advantageous to communicate:—

Bampfylde.	Javall.	Prince of Wales.
Bilston and Crump.	Nant-y-Glo (Pref.).	Positive Assurance.
Briton Medical.	Newcastle Chemical.	Peevor.
Cardiff and Swansea.	Newport Abercrombie.	Silstone Fall.
Chapel House.	New Sharston.	Sweetland Creek.
Clee Hill.	Palmer's Shipbuilding.	Thorpe's Gawber.
Flagstaff.	(£35 paid).	Tylywyd.
Glaiddale Quarry.	Penstruthal.	Welsh Freehold.
Grogwinion.	Providence.	West Tankerville.
	Parys Mountain.	

Business transacted in all descriptions of MISCELLANEOUS shares.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.

Transacts business in MINING and COLLIERY Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION. Business negotiated in Unmarketable Stocks and Shares. Speculative Accounts opened for the Fortnightly Settlement. A Stock and Share List forwarded to bona fide Investors free on application.
Bankers: The National Provincial Bank of England, E.C.

W. H. B. has SPECIAL BUSINESS in the undermentioned:—
70 Bampfylde, 2½%.
15 Bettws Llanwit Col.
30 Birdseye, £2 11s. 3d.
50 Bog, 8s.
10 Bilston and Crump.
40 Chapel House, £2½%.
10 Cape Copper, £20½%.
100 Clee Hill Colliery.
80 Chontales, 11s.
25 Cedar Creek, 31s. 6d.
20 Cardiff and Swansea.
3 Dolcoath, £50½%.
25 Devon Con., £2 6s. 3d.
10 East Lovell, £23½%.
100 Emma (Silver), £1 7s.
30 Eberhardt, £5.
50 East Caradon, 19s. 6d.
35 Flagstaff, £1 18s. 6d.
70 Frontino, 8s.
10 Great Laxey, £10½%.
20 Hington Down, 24s. 6d.
250 Javall.
25 Ladywell, £2 13s. 9d.
50 Last Chance, 19s. 6d.
70 Malpas, 20s. 6d.
120 Malabar, 11s. 9d.
30 Marke Valley, 29s. 6d.
50 New Fowey Consols, 15s. 6d.
40 New Quebrada, £2 18s.
70 Old Treburgett, 11s. 6d.
100 Penstruthal, 14s. 6d.
25 Pennerley, 29s.
70 Port Phillip, 16s. 6d.
200 Plynlimmon, 3s. 6d.
50 Parys Mountain, 9s. 6d.
80 Prince of Wales, 11s. 6d.
35 Roman Grav., £12½%.
40 Richdon, £2 13s. 9d.
75 Rookhope, 11s. 6d.
10 So. Condurow, £2 11s.
25 Sweetland Cr., £2 11s.
50 So. Roman Gravels.
2 Tincroft, £29½%.
30 Tankerville, £23½%.
100 Tecoma, 16s.
40 Uni. Mexican, £23½%.
4 Van, £22.
30 Van Consols, £2 3s. 9d.
100 West Maria, 7s.
100 Wheel Grenville, £5½%.
5 Wheel Kitty, £5½%.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 80, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS, at the lowest prices, in—
OLD TREBURGETT.
PARYS MOUNTAIN.
SOUTH CONDUROW.
OLD TALARGOCH.
MINERA (Buyer).
PRINCE PATRICK.
SOUTH TOLCARNE.
CARN BREA SHARES.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
17, CORNHILL, LONDON.

Turkish Six Per Cents. of 1854, 1855, 1862, 1865, 1871, and 1873 specially recommended; Wheel Grenville and Treleigh Wood, also Wheel Peevor and Crebor shares.

Business transacted at the following rates of commission:—Foreign Stocks, ¼ per cent.; and Mining Shares of £4 each and upwards, 1¼ per cent.; under £4, 1s. per share.

FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C.

Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Fortnightly accounts opened.
Bankers: London and Westminster, and City Bank.

SPECIAL BUSINESS in the following:—
Bilston and Crump.
Birdseye.
Cardiff and Swansea.
Cedar Creek.
Central Swedish.
Chapel House.
Chillington Iron.
Clee Hill.
Darlington Iron.
Denton Colliery.
Devon Consols.
Fairbairn Engineering.
Flagstaff.
Glaiddale Quarry.
Frontino.
Gt. Western Colliery.
Gold Run.
Hopkins Gilkes.
Javall.
Nant-y-Glo.
Newport Abercrombie.
Original Hartlepool.
Pennerley.
Palmer's Shipbuilding.
Peevor Coal.
New Sharston.
Silstone Fall.
Silstone Dodworth.
Sweetland.
Thorpe's Gawber.
Tylywyd.
Welsh Freehold.
Whitehaven Iron.

MR. WILLIAM WARD
(Late WARD and LITTLEWOOD).
CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.,
DEALS in ALL KINDS of STOCKS and SHARES, for cash or the account.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for December now ready, post free, price 6d.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

MESSRS. SMITH AND CO., 126, BISHOPSGATE STREET WITHIN, LONDON, E.C.

Messrs. SMITH and Co. Transact Business in every species of Stocks and Shares. SPECIAL BUSINESS in Chapel House, Blaen Cwmbach, Alltarni, and Clee Hill Collieries; Malpas, Malabar, Sweetland, and Birdseye Creek; Great Laxey, Tylywyd, and Grogwinion and Mellidur Valley Shares.
Messrs. SMITH and Co.'s "Investment Circular" may be had on application.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
Government and every negotiable Stocks dealt in for cash or account. Order and telegrams punctually attended to.
We advise immediate application and purchase of the BAMPFYLDE and LLANRWST shares. A rise in price is inevitable.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS, 3 and 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.
Orders received and commissions executed.
Bankers: National Provincial Bank of England.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.

MR. WM. MARLBOROUGH, STOCK AND SHARE DEALER,
20, BISHOPSGATE STREET WITHIN, LONDON, E.C.
(Established 18 years.)

MR. E. CHARTERS, 36, NORTHUMBERLAND STREET, CHANCERY CROSS, LONDON, can do BUSINESS in the FOLLOWING SHARES, free of commission:—
20 Almada, 16s. 6d.
70 Bog, 9s. 6d.
20 Birdseye Creek, £23½%.
4 Dolcoath, £49½%.
10 East Bassett, £11½%.
5 Great Laxey, £11.
50 Gawton, 16s. 6d.
50 Gannislake, £2¼%.
20 Marke Valley, £1¼%.
50 Mid-Mounta, £2.
50 Plynlimmon, 2s. 6d.
30 Pennerley, £1¼%.
50 Pedn-an-drea, £7¼%.
10 Providence, £3.
50 Ric, 7s.
20 Roman Gravels, £11½%.
80 Rossa Grande, 1s.
70 West Maria, 7s.
10 West Bassett, £7.
10 Wheel Kitty, £4¼%.
10 Wheel Uny, £3.
15 Hudson's Bay.
35 Hington, 23s. 9d.
15 Ifton Rhy, 49s.
200 Javall, 4s. 3d.
40 Last Chance, 19s. 9d.
100 London and California.
40 Lovell Tin, 15s.
40 Ladywell, 54s.
25 Llanarmon, 7s.
50 Malpas, 18s. 6d.
55 Malabar, 11s. 6d.
20 Devon Gt. Con., 47s. 6d.
50 Emma, 23s. 9d.
20 Eberhardt, £5.
70 Exchequer.
100 East Lovell, £23½%.
100 East Grenville, 12s.
55 Flagstaff, 39s.
60 Frontino, 8s. 3d.
110 Gold Run, 10s. 6d.
80 Glaiddale.
80 Grogwinion.
50 Gawton, 8s. 9d.
15 Great Laxey.
75 Richmond, £6 16s. 3d.
100 Ric, 7s. 3d.
600 Rossa Grande, 1s. 3d.
40 Silstone Fall, 23s.
50 Sweetland, 55s.
80 South Aurora, 11s. 6d.
55 So. Carn Brea, 27s.
30 So. Rom. Gravels.
15 St. Ives Consols, £23½%.
30 Thorpe's Gawber, £16½%.
20 Tecoma, 19s. 6d.
100 Tylywyd, 20s.
15 Tankerville, £23½%.
10 Tincroft, £29½%.
100 Uni. Bituminous, 10s. 6d.
60 United Mexican.
40 Van Consols, 42s. 6d.
45 Welsh Freehold, £23½%.
55 W. Esqair Ls, 40s.
40 West Goriaud, 22s. 9d.
30 Wheel Peevor.
15 Wheel Kitty, £5.
30 Wheel Uny, £23½%.

P. WATSON, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.

Bankers: The Alliance Bank (Limited); and Union Bank of London.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

This being Christmas week, the usual Share List is omitted, but will appear as usual on the 2nd of January.

MESSRS. PENNINGTON AND CO., 3, ROYAL EXCHANGE BUILDINGS, E.C., STOCK AND SHARE DEALERS, have BUSINESS in the undermentioned:—

Birdseye.	Tecoma.	Sweetland Creek.
Emma.	West Wheel Goriaud.	Malpas.
Flagstaff.	Gold Run.	Buller.
Kitty (St. Agnes).	Peevor.	Rica.
Cedar Creek.	Malabar.	West Esqair Ls.

Parties wishing to purchase or sell in the foregoing are requested to make early application. PENNINGTON AND CO., SWORN BROKERS.

TO INVESTORS.

MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD OF INVESTMENTS," published on the first Thursday in each month, contains an extensive Review of the British and Foreign Stock and Money Markets, &c., with an enumeration of safe investments, paying from 15 to 20 per cent. Price 6d. per copy, or 5s. annually.
PENNINGTON AND CO., 3, Royal Exchange-buildings, E.C.

JOHN MOSS AND CO., STOCK AND SHARE DEALERS,
224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., transact Business for cash or account on all descriptions of Stocks and Shares.

J. M. and Co. can recommend for investment shares that during the early part of 1875 are likely to double their present price.
Fortnightly accounts opened on advantageous terms.

G. E. SIMPSON, STOCK AND SHARE DEALER,
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

MESSRS. HARVEY, JORDAN, AND CO.,
MINING AGENTS, ACCOUNTANTS, AUDITORS,
MANAGERS OF PUBLIC COMPANIES, &c.

OFFICES.—30, MOORGATE STREET, LONDON, E.C.
LONDON OFFICES OF THE LLANTIRISANT TIN PLATE WORKS.

MESSRS. HARVEY, JORDAN, AND CO. undertake personally the INSPECTION of MINERAL PROPERTIES, the MANAGEMENT of COMPANIES entirely, or partially by keeping the accounts at their offices, or by periodical visits to the properties; AUDITING of ACCOUNTS, ARBITRATIONS, &c.

MESSRS. HARVEY, JORDAN, AND CO.
HAVE OPENED, at their Offices, a REGISTER of MINERAL and OTHER PROPERTIES, both ENGLISH and FOREIGN. Particulars inserted therein for vendors, and the same, with plans and reports, kept for reference to, by investors.

HARLAND AND CO., STOCK AND SHARE DEALERS,
235 and 236, GRESHAM HOUSE, LONDON, E.C.
Transact business in Kingston Valley, Chapel House, Alltarni, Cardiff and Swansea, Welsh Freehold, United Bituminous, and Clee Hill Collieries—Tankerville, West Tankerville, Lovell, Denbighshire, Tylywyd, Roman Gravels, Birdseye Creek, Sweetland Creek, and every description of Stocks and Shares.
Circular and Daily Price-List gratis.
Bankers: London and County Bank.

MR. JAMES HUME, STOCK AND SHARE BROKER,
1, ST. SWITHIN'S LANE, LOMBARD STREET, LONDON, E.C.
From 10 to 20 per cent. is obtainable from Government Bonds—quite safe—several strongly recommended.
SPECIAL BUSINESS in Richmond shares, for cash or account.
Business in all stocks and shares transacted by post or telegram, for cash or on account.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK AND SHARE BROKERS.
20, CHANGE ALLEY, CORNHILL, LONDON, E.C., transact business in Stock Exchange Securities and Mining Shares of every description.
A Selected List of Safe Investments forwarded to intending investors post free on application. Fourteen years' experience.

MESSRS. A. ENDEAN, FISHER, AND CO., STOCK AND SHARE DEALERS, 32, NEW BROAD STREET, E.C.
Bankers: London and Westminster, Lothbury.

MESSRS. J. TAYLOR AND CO., 86, LONDON WALL, E.C.,
and MINING EXCHANGE, SOUTH KING STREET, MANCHESTER,
MINING ENGINEERS AND INSPECTORS.
Business done in all descriptions of Stocks and Shares.
FOR SALE, 80 Aberdunant shares, at 12s. 6d. per share.

IMPORTANT.
TO MINE AGENTS AND MINING ENGINEERS.

MESSRS. BERKELEY AND CO. have INVENTED A NEW DESCRIPTION of STENCIL PLATE for LETTERING PLANS, which will enable any person to produce in an instant all kinds of Lettering, North Points, Trees, Borders, Scales, &c., upon Drawings, equal to the finest hand-work. These plates not only supersede all others ever introduced, but are supplied at less than one-third the cost. Illustrated Sheets of New Designs forwarded gratis on application to—
H. R. BERKELEY AND CO.,
WELLINGTON HOUSE, BRENTFORD ROAD, CHISWICK, LONDON.

MR. T. PARKYN, ST. AUSTELL, CORNWALL, MINING ENGINEER, has a grant from the Duchy of Cornwall of over FOUR HUNDRED ACRES of COAL, IRONSTONE, and FIRE-CLAY, &c., in the best Somersetshire coal district. Would be glad to treat with any respectable parties with a view to float it. All particulars can be known by applying as above.
New Fowey should be secured at once.—Thirty years' practical experience.
Bankers: South Cornwall Bank, St. Austell, Cornwall.

MR. JAMES STOCKER, 2, CROWN COURT, THREADNEEDLE STREET.

Railway, Bank, Foreign Bonds, and all other Stocks and Shares for Investment or Speculation.

SPECIAL BUSINESS in the following:—
50 Bampfylde, 43s.
30 Birdseye, 51s.
30 Bilston & Crump, £10½%.
35 Bog.
50 Cedar Creek, 39s.
80 Chontales.
40 Clee Hill Col., 8s. 3d.
70 Chapel House, £23 13s.
25 Cardiff & Swan., £3 18s.
60 Court Grange.
75 Don Pedro, 8s.
20 Devon Gt. Con., 47s. 6d.
50 Emma, 23s. 9d.
20 Eberhardt, £5.
70 Exchequer.
100 East Lovell, £23½%.
100 East Grenville, 12s.
55 Flagstaff, 39s.
60 Frontino, 8s. 3d.
110 Gold Run, 10s. 6d.
80 Glaiddale.
80 Grogwinion.
50 Gawton, 8s. 9d.
15 Great Laxey.
15 Hudson's Bay.
35 Hington, 23s. 9d.
15 Ifton Rhy, 49s.
200 Javall, 4s. 3d.
40 Last Chance, 19s. 9d.
100 London and California.
40 Lovell Tin, 15s.
40 Ladywell, 54s.
25 Llanarmon, 7s.
50 Malpas, 18s. 6d.
55 Malabar, 11s. 6d.
20 Devon Gt. Con., 47s. 6d.
50 Emma, 23s. 9d.
20 Eberhardt, £5.
70 Exchequer.
100 East Lovell, £23½%.
100 East Grenville, 12s.
55 Flagstaff, 39s.
60 Frontino, 8s. 3d.
110 Gold Run, 10s. 6d.
80 Glaiddale.
80 Grogwinion.
50 Gawton, 8s. 9d.
15 Great Laxey.
75 Richmond, £6 16s. 3d.
100 Ric, 7s. 3d.
600 Rossa Grande, 1s. 3d.
40 Silstone Fall, 23s.
50 Sweetland, 55s.
80 South Aurora, 11s. 6d.
55 So. Carn Brea, 27s.
30 So. Rom. Gravels.
15 St. Ives Consols, £23½%.
30 Thorpe's Gawber, £16½%.
20 Tecoma, 19s. 6d.
100 Tylywyd, 20s.
15 Tankerville, £23½%.
10 Tincroft, £29½%.
100 Uni. Bituminous, 10s. 6d.
60 United Mexican.
40 Van Consols, 42s. 6d.
45 Welsh Freehold, £23½%.
55 W. Esqair Ls, 40s.
40 West Goriaud, 22s. 9d.
30 Wheel Peevor.
15 Wheel Kitty, £5.
30 Wheel Uny, £23½%.

Bankers: London and Westminster.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.,
MINING AGENTS, AND STOCK AND SHARE DEALERS.
"Investments and Speculations, 1874."—Post free upon application.

PRINCE PATRICK, AND SOUTH PRINCE PATRICK.—Information of these mines, which are comparatively unknown to the public, may be obtained upon application. Shares bought and sold at market prices.

MR. TIMOTHY HUGHES,
59, SEEL STREET, LIVERPOOL.

The Registered Office of the PRINCE PATRICK, GROSVENOR, WEST BRYN CELYN, and GREAT EAST FOXDALE LEAD MINING COMPANIES (LIMITED).
Full information respecting these Mines forwarded on application.

RELIABLE INFORMATION given respecting Mines in the Isle of Man, Flintshire, and the neighbouring districts.

NICHOLAS M. MAXWELL, LONDON, ENGLAND, Ex-Superintendent Flagstaff Mine, Utah.

WM. C. HENDRIE, San Francisco, California.
MAXWELL, HENDRIE, AND CO.,
MINING AND MECHANICAL ENGINEERS,
3, QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C.;
AND
SAN FRANCISCO, CALIFORNIA, U.S.A.

BRANCH OFFICES: BALT LAKE CITY, UTAH. DENVER, COLORADO.
Are prepared to inspect, survey, and value Mines, undertake their management, furnish specifications, drawings, and estimates for all classes of Mining Machinery, and for all descriptions of work in connection with Mining.
Cupola and Reverberatory Furnaces, Crushing Mills, &c. Reports carefully made on Mines.

THOMAS EDGLEY AND CO.,
AGENTS for the PURCHASE and SALE of
COLLIERIES, AND OTHER MINERAL PROPERTIES, &c.,
MANSON HOUSE CHAMBERS,
12, QUEEN VICTORIA STREET, LONDON, E.C.

GROSVENOR, ENTWISLE, AND CO.,
(Late GROSVENOR AND CO.)
STOCK AND SHARE BROKERS
88, PORTLAND STREET, MANCHESTER.

MR. R. PERCY ROBERTS,
FINANCIAL AGENT,
60, ENGLISH STREET, CARLISLE.

MR. J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

CAPTAIN ABSALOM FRANCIS,
MINING AGENT, ENGINEER, AND SURVEYOR.
GOGINAN, ABERYSTWYTH.

CAPT. ANTHONY (formerly Manager of the Providence Mines),
HAVING HAD THE PROVIDENCE MINES INSPECTED, will forward copy of Report on receipt of One Guinea.
Lelant, Hayle, Cornwall.

JOHN PETHERICK, M.E. (from Camborne, Cornwall), having had nearly Ten Years' experience in the different Mining Districts of Mexico, OFFERS his SERVICES to the mining world to SURVEY and FAITHFULLY REPORT on MINING PROPERTY in any part of this REPUBLIC.
Pachuca, Mexico, June 13, 1874.

COLONIAL BANK.
Subscribed Capital £2,000,000
Paid-up Capital 600,000
Reserve Fund 77,000

The Court of Directors of the Colonial Bank hereby give notice that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of proprietors will be HELD at the London Tavern, Bishopsgate-street Within, on THURSDAY, the 7th of January, 1875, at Two o'clock precisely, to receive the report of the proceedings of the corporation, and for the election of five directors and one auditor, in the room of the following gentlemen who go out of office by rotation, viz.—Charles Cave, Esq., Wm. B. Hume, Esq., Eden Colville, Esq., Wm. Davidson, Esq., and James Fletcher, Esq. (directors), and Charles A. Prescott, Esq. (auditor), all of whom, being eligible, offer themselves for re-election.
The Transfer-books of the corporation will be closed on the 24th December, and re-opened on the 11th January, 1875.
By order of the Court of Directors,
JAMES CLARK, Secretary.
13, Bishopsgate-street Within, 11th December, 1874.

THE RIO TINTO COMPANY
(LIMITED).
Notice is hereby given, that the SHARE REGISTERS of this company will be BALANCED on the evening of Thursday, the 24th instant, for the preparation of the INTEREST WARRANTS, which will be posted to the proprietors on the 31st inst., for payment on the 1st January.

THE INTEREST will amount to FIVE SHILLINGS AND TWOPENCE PER SHARE.
The books will not be closed on this occasion.
By Order, R. J. FENNESSY, Secretary.
Offices of the company: 17, Cornhill, London, E.C.,
18th December, 1874.

MALPASO GOLD WASHING COMPANY
(LIMITED).
Notice is hereby given, that the ORDINARY GENERAL MEETING of the Malpas Gold Washing Company (Limited) will be HELD at the offices of the company, No. 1, Winchester House, Old Broad-street, London, E.C., on TUESDAY, the 29th December, 1874, at One o'clock.

The Transfer-books will be closed from the 28th instant to the 13th proximo.
By order, SYDNEY A. COBBETT, Secretary.
1, Winchester House, Old Broad-street, London, E.C., 15th December, 1874.

RICA GOLD WASHING COMPANY
(LIMITED).
Notice is hereby given, that the ORDINARY GENERAL MEETING of the Rica Gold Washing Company (Limited) will be HELD at the offices of the company, No. 1, Winchester House, Old Broad-street, London, E.C., on TUESDAY, the 29th December, 1874, at Two o'clock.

The Transfer-books will be closed from the 28th instant to the 13th proximo.
By Order, SYDNEY A. COBBETT, Secretary.
1, Winchester House, Old Broad-street, London, E.C., 15th December, 1874.

LLANARMON MINE.
The Advertiser, having obtained a RELIABLE REPORT, by an Expert, of the Prospects of this Mine, will SEND a COPY on receipt of £1 1s.

Address, "Llanarmon," MINING JOURNAL Office, 26, Fleet-street, E.C.

LLANARMON LEAD MINE.
ONE HUNDRED SHARES TO BE SOLD AT ONCE.
Address, "S. T. P.," MINING JOURNAL Office, 26, Fleet-street, E.C.

950 BLAKE'S PATENT ORE-CRUSHERS
NOW IN USE.

For catalogues, apply to—
MR. H. R. MARSDEN, SOHO FOUNDRY, LEEDS.

Only maker in the United Kingdom.

MR. JOHN CARTER, MINE SHARE DEALER,
CAMBORNE, CORNWALL, transacts business in every description of shares at close market prices of the day.

THE NASCENT COPPER PROCESS.

The PROPRIETORS of this PATENT METHOD of TREATING LOW-CLASS SILVER and COPPER ORES are PREPARED to GRANT LICENSES for its USE at LOW ROYALTIES.

There is hardly a Mixed Metal mine in the world but may be made to pay dividends under this system.

All communications respecting the above should be addressed to—

MESSRS. EMMENS BROTHERS AND CO., 8, OLD JEWRY, LONDON, E.C.

Meetings of Public Companies.

ST. JOHN DEL REY MINING COMPANY.

A general meeting of shareholders was held at the London Tavern, on Wednesday,—Mr. JNO. HOCKIN (managing director) in the chair. The report (which appeared in last week's Journal) was taken as read.

The CHAIRMAN said: Before entering on the business of the meeting, I may state that since the publication of the directors' report, advices have been received from Morro Velho, both by letter and by telegram, reporting the produce and profit up to a much later date than is given in the report. The report, you observe, gives the produce for September at 25,440 oits.; for October it was 28,724 oits.; for November (13,500L.) it was 33,500 oits. The profit for September was 4370L.; for October, 6189L.; and though the official report has not been received, it cannot, from the produce, be less than 7500L. (which has since been ascertained by telegram to amount to 7900L.), showing a most gratifying progressive monthly increase both in produce and profit. We learn, too, from these advices that the dry weather from which we have suffered during the half year referred to in the report had been succeeded by ample rains. At our last meeting, gentlemen, we promised that we would recommend the payment of a dividend as soon as the profits earned placed us in a position to do so. We meet you to-day to fulfil that promise, and though the dividend is not quite in the old style, we hope it will be considered a tolerably handsome first instalment, particularly as we are enabled, after carrying the usual 10 per cent. on the dividend to the reserve fund, to carry forward the respectable balance of 5619L. to the next half-year. The dimensions of the mine as already opened out—or, in other words, the working space—is very small, compared with the space we had to work on when the last dividends were paid, but it is pleasing to be able to show, as we do on the 7th page of the report, that that space is being steadily enlarged month by month, resulting as already shown in increased produce and profits. The space opened out during the half year only averaged a length of some 114 ft., with an average width of some 25 ft., whilst in 1867 the length of the lode then being worked on was 700 ft., with an average width of 36 ft. It should be borne in mind, too, that of the quantity of ore quarried during the six months fully one-half was the result of sinking and driving, modes of extraction which are tedious and expensive, as compared with stoping, which was almost the sole mode of extraction in 1867. Notwithstanding these very palpable drawbacks, the produce of gold for the six months is only about 2 per cent. less than half the produce for the corresponding period of 1867. One very favourable feature in working this, as it were, new mine, as compared with the old one, is that the cost of obtaining the gold for the six months is 1874 now under consideration has been only 49 per cent. of its value, whilst the cost of obtaining the produce for the corresponding period of 1867 was 57½ per cent. of its value. These results we think highly satisfactory and encouraging, especially when we bear in mind the temporary disadvantageous mode of quarrying, as already referred to, and also that many of the fixed expenses for management are necessarily as heavy now as they will be when we are able to treat twice the quantity of ore we now do. Another favourable circumstance contributing to the satisfactory results of the half-year's operations will be found on comparing the average yield of the whole of the mineral quarried during the half-year with the yield of former years. The highest recorded average yield of the whole quantities quarried (1862) was 5·927 oits. per ton, whilst you will see by the statement at page 5 of the report that during the current half-year it was 7·838 oits. per ton, and we have since been informed that the yield for October and November was much more favourable, being respectively 9·2 oits. and 9·4 oits. per ton. It is true that in 1867 the yield of the ore stamped was brought up to 8·438 oits. per ton, and in 1866 to the unprecedented high yield of 10·305 oits. per ton, but this was brought about by the rejecting in 1867 36 per cent., and in 1866 43 per cent. of the mineral quarried, but on which the heavy expense of quarrying, bringing to the surface, and there turning over to reject the worthless had been incurred. During the first three months of the half-year 84 stamp-heads only were kept working daily. During the last three months 12 more were brought into use, and this month it is intended to add nine other heads, making a total of 105 heads, after which there will be another 30 to complete the full number of former years. Up to the date of the last advices the lode continued to open out most satisfactorily. The mine captain in his report for October says—"The lode throughout the mine continues to be all that can be desired." Every attention is being paid to timbering and securing at all points where required. As regards finances, the figures in the report speak for themselves. Besides being in funds to pay the dividend, to pay off the last of the debentures, amounting to 5900L., and all drafts due before the arrival of the next gold, we have investments in first-class securities amounting to 16,000L., to which we now add 2530L.

Mr. J. SCHOFIELD (Stock Exchange) seconded the proposition. The statement of the Chairman was highly satisfactory. It was unprecedented in the history of mining companies to pay a dividend within so short a period after a mine had been re-opened. Such a result was perfectly unexampled in the history of mining. Already everything had been fully realised—in fact, the results already obtained had exceeded their most sanguine anticipations. He was glad to hear Mr. Hockin say that the profit for November amounted to 7500L. He found that in August, 1867—before the fire—45,500 oits. gave a profit of only 7350L., but they had now realised a profit of 7500L. upon a return of 33,500 oits. It was very clear that the percentage of profit must be much larger, in consequence of the increased facilities of working by the perpendicular shafts. He should like to know what number of stamps had been at work to return 33,500 oits.?

The CHAIRMAN said that 93 had been employed in November, and in December there would be 105. The full crushing capacity was 135 stamps.

Mr. SCHOFIELD said the increase in the returns and profits must be very large during the next six months, provided there was sufficient water.

The CHAIRMAN said there would be abundant water all through the wet season. The last had been an exceptional dry season—the average annual fall at Morro Velho was 62 in., and of that some 55 fell during the wet season; last year the total rain-fall was only 45½ in.

Mr. SCHOFIELD supposed there were means to bring in additional water if it should become necessary.

The CHAIRMAN said there were means of doing so, and the matter was under consideration, and when determined upon the charge would be included in the monthly cost, as it could only be done gradually. The outlay could not exceed 500L. per month.

Mr. SPENCER HERAPATH said that the yield of the ore for the six months prior to the fire averaged about 7 oits. per ton and the monthly profit averaged 8500L. They were now dealing with ore yielding 9 oits.; therefore, it could be only a question of quantity and capacity to produce proportionably increased profits, the produce of the ore being of unprecedented value. They were entirely indebted to their able staff on the other side, as well as to Mr. Hockin and the board at home, for bringing about the present results. Had the shareholders been governed by their own feelings he doubted whether they would not have given up in despair—(no, no)—but they were now landed in a condition of prosperity, with prospects brighter than anything hitherto known in the history of mining. Their perseverance had been richly rewarded, and great credit was especially due to Mr. Hockin, whose practical knowledge had encouraged them to go on, which had opened out before them the prospects of a brighter future than known at any former period. The past had proved the incalculable value of a substantial reserve fund, and he hoped the shareholders would support the board fully in setting aside sufficient for a reserve fund to meet any contingency that might occur. They were now looking forward to a steady development of the property, and to extend operations upon the lode, the yielding capacity of which was only limited by the mechanical contrivances brought to bear.

Mr. T. JONES asked if samples of the ore were occasionally sent home for the purpose of testing its quality?

The CHAIRMAN said they had persons on the mine perfectly qualified to analyse the stone, and they did not want any help in this country.

Mr. T. JONES said they had all confidence in their officers, but it could do harm to keep a check upon them.

Mr. TENDRON said if the hon. proprietor would call at the office he would see there was no scope whatever for dishonesty. The lode was extraordinarily regular in its yield, but the gold was invisible, and it was only by working it upon a gigantic scale that they were able to realise profits; there was not the slightest reason for exercising the check suggested—there was no possibility of collusion; therefore nothing could occur to prevent the shareholders receiving the full amount.

Mr. T. JONES said he was much obliged to the last speaker for what he had told him, although he had told him nothing that he was not perfectly aware of before;

nor had it in the slightest degree altered his opinion of the desirability of ascertaining from time to time the average yield of gold in the stone.

The CHAIRMAN said this was one of the points that the directors kept most anxiously before their minds, and he was perfectly convinced that nothing would be gained by having samples of the stone sent over to this country. The samples were taken very carefully from the sand or pulverised stone, and not from the stone itself.

Mr. SCHOFIELD said, with all due deference to the board, he would suggest that preparations be made for obtaining an additional supply of water, because he was satisfied that in six months there would be more ore to crush than ever before.

The CHAIRMAN said every necessary preliminary had been adopted, and surveys made, but no decision had as yet been arrived at.

The motion adopting the report and accounts was then put and carried unanimously.

A dividend of 10 per cent., free of income tax, was declared.

Mr. SPENCER HERAPATH proposed that the best thanks of the shareholders be given to the Chairman for the business-like way in which he had presided at the meeting, and also for the statement he had submitted of the company's affairs. His experience as a practical gentleman acquainted with mining was unsurpassed. He proposed that the thanks of the shareholders be given to him and his colleagues. The proposition having been duly seconded was put and carried unanimously.

The CHAIRMAN having thanked the meeting on behalf of his colleagues and himself for this additional mark of confidence, he need hardly say that it afforded him considerable pleasure to find that the mine had been placed in its present satisfactory position, and he only hoped it would continue so.

Upon the proposition of Mr. R. HERAPATH, seconded by Mr. SCHOFIELD, a vote of thanks was passed to Mr. Gordon and the staff at the mines.

The CHAIRMAN having stated that the vote should be forwarded by the next mail, added that he hoped that at the next meeting Mr. Gordon himself would be present. (Hear, hear.)—The meeting then separated.

HOLCOMBE VALLEY MINING COMPANY.

A general meeting of shareholders was held at the offices, Austin-friars, on Dec. 19,—Mr. J. IRVING COURTNEY in the chair.

Mr. W. J. LAVINGTON (the secretary) read the notice convening the meeting.

The CHAIRMAN said that since the last meeting he had visited Holcombe Valley, and would now tell the shareholders briefly the condition in which he found the mines. He arrived safely there on Sept. 3, after a very tedious journey from the neighbourhood of San Francisco of seven days duration. Holcombe Valley, some 120 miles inland, was about 8000 ft. above the level of the sea. He was not able to make the inspection he wished, from the causes he would relate. There was a plan of the surface workings of the mine prepared by Mr. McCaskill, which would be found of considerable assistance in understanding the respective workings. He found that No. 2 incline was under water, but five days sufficed to pump it clear. In No. 1 incline, which was 106 ft. deep, he was only able to get down 60 ft., owing to the badness of the air. He was accompanied by Mr. Thomas, the superintendent of a neighbouring mine, and as well as it could be seen the ledge was some 5 ft. wide. They could not reach the bottom, because the air would not allow them to do so, but the average width of the ledge was reported to be about 3 ft., and the last eight days run of the mill was upon ore broken from this point. The ledge beyond our boundary was clearly traceable on the surface. They proceeded to No. 2 incline, which was 170 ft. deep, and at a point 50 ft. from surface, and at another point 120 ft. from surface, two levels had been driven. The 120 ft. level had been run a distance of 175 ft. in ore, and it intersected the air-shaft at a distance of 107 ft. from the incline. The ledge at a point beyond the air-shaft was divided into stringers, which he thought was owing to its being under a ravine. He was accompanied by a shareholder in the company, who he regretted was not present to-day; they took specimens from various places along this level, which were now upon the table; they only took such specimens as showed visible gold, and as would be seen were extremely rich. The other level, 50 ft. deep, had yielded considerable quantities of ore. The map showed the ground stopped away on the Mammoth ledge, and that a great deal of stoping had been done by the former proprietors. They then visited the main shaft, which was 64 ft. in depth; he agreed with Mr. Haley, Mr. Bowe, and others that the correct and proper mode of working the mine would be through this shaft, and he could not but express his regret that the sinking of this shaft was discontinued. Mr. Haley had stopped it on account of the poorness of the ledge found in the incline when down some 130 or 140 ft. The ledges pitched towards the shaft; he could not inspect the San Bernardino ledge, because since Mr. McLean and Mr. Bowe inspected it the timbers had rotted and the shaft fallen in. Nearly all the work done by the present company was upon the Mammoth ledge, although something had been done upon Pine Tree ledge, but the bulk of the ore had been extracted from the Mammoth. The mill was not at work when he arrived, although it had very lately been running upon some rock, which came from the mines of a neighbouring company, called the Gold Mountain Company. The mill was fitted with five stamps, for the purpose only of testing the rock; its situation was bad, and it had quite failed to do the work in the manner he could have wished. There was no fall, and no appliances were erected, or could be erected, to save the sulphurets. The results as yet obtained were only approximate; 100 tons of refuse rock produced 5590; of course a considerable quantity of the gold had been taken up by the copper plates. The second run of 30 tons produced 745, the third run of 151 tons produced 1401, and the fourth run of 150 tons gave 1181, so that 331 tons produced a gross produce of \$3327. He had gone into the calculation with Mr. Bowe, and they agreed that the average yield from the veins had been about \$10 of free gold per ton. Mr. Haley considered that the ore worked \$12 in free gold, but he (the Chairman) did not come to the same conclusion. It was a very material question for them as to what the sulphurets were really worth, what amount of gold they contained, and what percentage of sulphurets did the rock yield. From the assays made by the assayers in Los Angeles, the tailings in September from the end of the sluice gave \$18, and the concentrated tailings for the same month assayed \$410; for May the tailings from the end of the sluice gave \$32, and the concentrated tailings \$486. Mr. Haley said that these samples were carefully selected, and it was from these results that he considered he was losing \$30 per ton in sulphurets. And Mr. Haley had acted quite right in shutting down the mill if all the sulphurets, or nearly all, were totally lost. It was to be regretted that some cheap machinery easily erected had not been fixed in connection with the mill, although there was no doubt considerable difficulty in putting in machinery that would effectually save the sulphurets, because there was no fall. He had had occasion to visit several mills during his stay in California, and he had found that there were many systems at work, some one, or modification of some one, might be adopted to enable them to make some estimate with regard to the percentage of the sulphurets. He desired Mr. Haley to forward some of the sulphurets to San Francisco; of course they were not cleaned or concentrated. He also desired that other samples should be forwarded to London. The latter gave over 7 ozs. of gold to the ton, but they had been informed that samples sent to San Francisco gave only 1½ oz. of gold to the ton. The difference was so great as to be quite inexplicable, and the board had taken steps to have the samples re-assayed, with the view if possible of clearing up the extraordinary discrepancy. Another portion of the company's property was the gravel claims; of this there were 140 acres, situated, unfortunately, in a basin, so as to render it unsuitable for hydraulic mining. There was no sufficient outlet, and could not be provided unless at a very great expense. It was not such an auriferous deposit as he had had occasion to speak of in the northern part of the State, the formation was of a different geological age to that of the river deposits. The depth of the deposit had not yet been ascertained, because the valley acted as the natural drainage for the country around, and there had not yet been erected machinery of a sufficient power to sink to the bed rock. Some people thought it was 50 or 60 ft. deep, while others, looking at the surrounding country, considered it to be a depth of 200 ft.; the whole surface of the valley was being worked over by different people. He thought the proper course for them to adopt would be to test the value of this deposit by boring, and then having fixed upon a suitable locality sink the shaft, pump the water, raise the gravel, and wash it with the water so pumped. It was thought that a sum of \$10,000 would provide adequate machinery for this purpose. He had been much disappointed at not finding the mines more developed, and it was his opinion that before any mill were erected, by which he meant a mill of (say) 15 or 20 stamps, much more work should be done at the mines. They were at no depth at all; their deepest level was only 120 ft., and certainly before they went to the expense of erecting a

mill the mine should be much more developed. The main shaft should be sunk at least 100 feet deeper, and cross-cuts driven to the Mammoth ledge to No. 1 incline, that would be a distance of about 120 ft.; drifts should be run both ways on the ledge (say) for 100 ft. each. He thought that was the least work that should be done before they put up a mill. Those workings would test the mine to some extent, though, of course, still only at a shallow depth. At the main shaft hoisting machinery must be erected; according to an estimate, to complete these mining operations it would cost at least \$10,000, and to pay the balance due upon the mill, freight, and other charges would require \$12,000. He arranged that the company should have the mill by paying the sum of \$2000 in addition to what had been already paid, therefore his estimate was that the sum of \$30,000 was required; several months would be occupied in doing the work. He found on his arrival that there was a heavy debt on the mines. Mr. Haley, although stopping the mill, had gone on developing the mine, and had accumulated a debt of \$6558; that had all been paid off, according to the latest accounts included in the balance-sheet. It would appear that they owed Mr. Haley 69L., and there were some salaries still unpaid, but he believed there were no further debts up to the date of these accounts. The property up to that time was practically free of debt. He had to consider what course should be adopted, and after mature consideration resolved to close down and stop all expenses as far as practicable; he arranged with Mr. Haley, who consented to stay in charge of the property, that they should employ a watchman if necessary to protect it, as they did not intend doing any work at the mines, so that there was no necessity to retain any staff. He saw that the mill had been running, but owing to an unfortunate occurrence it was then stopped. He had further heard that it had since been put to work, and 51L. already received for rent, and it was hoped it would be rented at \$250 per month. There were mines in the neighbourhood of which a high opinion was entertained. As far as this company was concerned, he should recommend that before attempting to raise any more money they should know accurately the value of the ore: that could only be done in this way—by setting the mill to work again and devising some cheap contrivance to save the sulphurets. When they had learned the result of this would be the time to consider how best to raise further capital, till that had been done he should not recommend any further funds to be provided. They would act upon the information with regard to the sulphurets as soon as received. There are 500 shares not referred to in the balance-sheet, the calls upon which were still due. He then moved that the report and accounts be received and adopted.

Mr. BOWE seconded the proposition, which was put and carried unanimously. The retiring directors were re-elected.

Mr. F. COPE said that the acknowledgments of the shareholders were due to their Chairman for the valuable and disinterested services he had rendered the company. He had at his own cost visited the mines, the result of which they had just heard. He moved that the best thanks of the shareholders be accorded to their Chairman.

Mr. BOWE seconded the resolution, which was put and carried unanimously.

The CHAIRMAN, having acknowledged the vote, stated that it was clearly the duty of some members of the direction of English companies working mines in America to visit the property at least once every year, and not leave it entirely in the hands of superintendents.

RUBY CONSOLIDATED MINING COMPANY.

The annual general meeting of shareholders in this company was held on Wednesday, at the London Tavern,

Mr. W. A. MALCOLM in the chair.

Mr. M. AIKMAN (the secretary) having read the notice convening the meeting, read the minutes of the last meeting, which were confirmed. The report of the directors and the accounts were taken as read.

The CHAIRMAN said that as the shareholders had been good enough to take the report and accounts as read, it became his duty to make a very few remarks upon them. But before proceeding to make these few remarks he wished to call their attention in the first place to a printer's error in one of the items of the accounts. The last item but one on the credit side of the balance-sheet was printed as 3636L. 13s. 3d., instead of which the figures should have been 3616L. 13s. 3d. This clerical error did not, however, affect the total, which was quite correct, but the mistake was not discovered until the reports had been printed. In moving the reception and adoption of the report and accounts he had but a very few remarks to make. The present board of directors had been constituted according to the desire of the shareholders, he believed. Since then it had been their endeavour to carry out the suggestions made by the committee of investigation in the report which they had all received, and which the shareholders had no doubt perused with great attention. They had endeavoured to consolidate the affairs of the company to the best of their ability, with what success it would be seen by the accounts. The money remaining due for unpaid calls at the last meeting had been called in to the utmost possible extent, and he had no doubt the greater part of them would be recouped to the company, for it was not right that anyone should escape the payment of calls. The accounts from Mr. Heynemann had not yet been received, but they would probably arrive during next month; and when these were received the directors would be able to ascertain what was the exact position of the company's affairs at the mine up to the latest date. They had also asked Mr. Heynemann to forward a detailed statement as to how the property of the company stands in every respect. The furnaces were leased, and they alone make a very valuable property of the company. They net to the company \$2000 a month, and produce an amount of specie second only to one other furnace in the State of Nevada. The funds which had been received for the liquidation of several matters in connection with the company here had been used solely to pay the absolute debts of the company in this country, and he would shortly be very happy to read a statement of the manner in which the money had been collected and expended up to the present day, if the shareholders were desirous of possessing that information. This statement had been drawn up because the directors had not thought that the accounts now presented to the shareholders reached down to so late a date as might be wished—they would, of course, like to have them to the present moment, but this could not be done. He thought the shareholders would approve of the way in which the directors had laid out the money. They had taken steps to ascertain the exact position of the company. He had himself a personal friend in California, a gentleman of the highest respectability, and one upon whose words reliance could be placed. This gentleman belonged to one of the first firms in San Francisco. He (the Chairman) had applied to him to supply a correct report on the position of the company's property, and he (the Chairman) thought the letter supplied by his friend gave as much information on this subject as it was possible for an outsider to ascertain. He would read this letter to the shareholders shortly. There was no doubt the company was in want of money, and to carry on the affairs of the company the directors must have money. He hoped, therefore, that the shareholders would adopt the suggestion the directors had made to raise money on debenture bonds, and to subscribe liberally towards those bonds when created. The intention of the directors was to select the most suitable person they could find to proceed to America to ascertain everything connected with the mines and to furnish a full report on the matter. When the directors had this report they would at once place it before the shareholders for them to say how the board should proceed. That they had a good property was an undoubted fact, and it was, therefore, most essential that the shareholders should subscribe in a considerable proportion to the shares they now hold. They did not intend to ask for all the money which the Articles of Association gave them power to raise, to be subscribed, they merely intended to call up a portion, and that portion would be apportioned ratably amongst all the applicants for the debenture bonds. He would now read the letter from his friend in San Francisco, to which he had referred; but as it was a letter addressed privately to himself he asked that the Press would not take notice of it. (The Chairman then read the letter referred to.) He thought the directors were right in concluding that this information was so far satisfactory, that they have a valuable property, and, coming from a disinterested person, upon whose word the most implicit confidence could be placed, he thought the letter should be received as most satisfactory; that was his own opinion, and he would leave the shareholders to form their own conclusions. With this letter before them the directors thought they had every right to ask the shareholders to subscribe for the debenture bonds, and a scheme had been very carefully prepared by the company's solicitor and the directors, a scheme which he had no hesitation in asking the shareholders to confirm. The only way to do any good with the company was to make "a long pull, a strong pull, and a pull altogether," for unless the money was subscribed nothing could be done for the property. There was one thing only which he wished to mention with regard to the accounts, that was the remarks made by Mr. Sully, the auditor, in regard to the accounts, which was as follows:—

"I have compared the accounts submitted to me with the books of the company, and find them to be correct. I note that the 2500 forfeited shares referred to in my last report have been now entirely written off by reducing the liability on capital account, on the one hand, and lessening the valuation of assets by the same sum, on the other hand. The only other items which require notice in this report are the accounts called Labour and Supply Accounts. In the last balance-sheet a portion of the amount under these heads was charged to Trade Account. The remaining portion was supposed to have been expended on the properties, and improved

their value by so much. In the present accounts the whole of the Labour and Supply Accounts are charged to Capital Account, increasing the assets by so much. As stated in my last report, I have no means of judging as to how far this appropriation is correct in principle.

Mr. Sully had told him in conversation that he simply had to make that as a personal remark, to explain that he had not himself the means of stating whether appropriation to the different accounts was right or wrong. He, however, thought that the accounts were made up in the customary and proper manner. He could not conclude his remarks without mentioning that the directors had met with the greatest consideration from Messrs. Sully and Girdlestone and the other people in this country to whom money was due. A settlement had been made with Messrs. Sully and Girdlestone up to Oct. 31 on very favourable terms indeed, and the other accounts were equally satisfactory in that respect. He would now propose the reception and adoption of the report of the directors, and the statement of accounts.

Colonel D'Oyley seconded the motion. The CHAIRMAN then said that one of the shareholders had submitted an amendment, which would not doubt be quite as satisfactory to the body of the shareholders as to the directors, but he would suggest that it would be more convenient as a substantive resolution.

Mr. BERNARD (the shareholder who had forwarded the amendment) said he was quite willing that his amendment should be treated as a substantive resolution. The report and accounts were then adopted.

The CHAIRMAN then read a supplementary account, stating the amount of money in hand when the present directors took office was 7s. 10d. Since that time they had collected in various ways 520l. in cash and 100l. in bills in respect of calls paid up. A small amount was still to be received from one gentleman, another gentleman was obliged to pay in monthly instalments, and 35s. was to be received from a gentleman whose address had not yet been ascertained; 60l. was owing by a gentleman now deceased, but his estate would, no doubt, pay that. The late directors had returned for their fees taken 260l. in cash and 400l. in bills, making the realisation 500l. in bills and 780l. in cash. Some of the bills would shortly become due, and would, no doubt, be honoured. The directors had expended since the last meeting 200l. to the Messrs. Emsley, of which 67l. had been returned. Messrs. Markley and Co. (the solicitors) had been paid the fees which they had actually paid on behalf of the company. Messrs. Sully and Girdlestone had accepted 100l. in bills and 60l. in cash, settling their account to Oct. 31, thereby waiving their claim to 90l. The secretary's salary and the stationery account had also been paid, and the petty cash paid amounts to 30l. 10s., which left 57l. 2s. in hand in cash and 400l. in bills. This would enable the company to pay its way on this side of the water for six or nine months, but nothing more, and he hoped, therefore, that the subscriptions would come in before that time, so that some proper person could be sent to America.

Mr. BERNARD then moved—"That the shareholders, having full confidence in the directors, do hereby authorise them to raise on the best terms possible a sufficient sum of money to pay off any indebtedness, and for the further development of the company's properties." In doing so, he said he thought his resolution, if passed, would be more satisfactory than the resolution mentioned in the directors' report, which was that 25,000l. should be raised on 6 per cent. per annum debenture bonds. They might have to pay a little more, which would necessitate the calling of another meeting to make the required alteration. His resolution added to the report which had been adopted would, he thought, leave the hands of the directors untrammelled, and they might then be able to get the company out of the mud. He thought that trustees should be appointed for the debenture holders, for unless this was done he would not subscribe, and that the money should be put aside for getting back their mines. Mr. Heynemann was, no doubt, entitled to his money, and the company to do what they liked with it. Mr. Heynemann would accept the money, and at once give the company back the mines, but if he did not do so they could recover them by the process of law. He (Mr. Heynemann) was bound to give the shareholders an account of every pound of ore which had been taken out of the mines, and he did not believe that Mr. Heynemann would give them anything but correct accounts. The action which he took in taking possession of the mines was certainly not the act which a man in his position, having the confidence of the shareholders, should have done, but the thing now for the shareholders was to get them back. He would subscribe 200l. for debenture bonds on any proper terms. He thought they should first be offered to the shareholders, and then placed on the market, and the money raised in the best manner they could. There were the furnaces intact, and, therefore, the money was perfectly safe, for they were, with one exception, the best furnaces in Nevada. He had friends out there who had told him that the property was a very valuable one, and that they had a good chance of paying quite as good dividends as the Richmond had done. Therefore the security for the debenture bonds was certain, for the furnaces were worth quite 50,000l. to sell. He earnestly hoped that the shareholders would come forward, and make an effort to recover their property, which he thoroughly believed to be a very valuable one. It would, perhaps, be well if the shareholders present would pledge themselves to take a certain amount of debenture bonds, for the directors would then know how to act.

Mr. E. LEE said he should like to ask Mr. Markley whether this proposal would interfere with the Articles of Association?

Mr. MARKLEY said it would not. The directors had power to raise money on such terms as they might think fit to the extent of 50,000l.; but they must hold a special meeting, and obtain sanction to raise any money beyond 50,000l. All the directors had agreed to give the shareholders notice of what their intention was. No doubt Mr. Bernard's resolution would strengthen the hands of the board.

Mr. LEE said that under these circumstances he should have pleasure in seconding the resolution of Mr. Bernard. He believed there were not many gentlemen who would put their hands in their pockets to find debenture bonds, but he believed there were financial agents outside who might be inclined to find the money. He felt that if money were raised good results would accrue to the company. He had made some enquiries relative to the value of the mine, and he was confident there was a large amount of ore to be extracted from the mine, which would yield results equal to the Richmond Consolidated Mining Company.

The resolution was then put and carried. Mr. LEE moved that Col. D'Oyley be re-elected a director. He said that Col. D'Oyley was one of the original directors, and had always worked hard to promote its welfare.

The resolution was seconded by a shareholder, and carried. Col. D'OYLEY, in acknowledging his re-election, said he was a considerable shareholder, and should do his utmost to promote the interests of himself and brother shareholders.

The CHAIRMAN, in answer to Mr. Bernard, said the directors were willing to take their proportion of the debentures, and he hoped they would be supported by the shareholders. A vote of thanks to the Chairman and directors closed the proceedings.

ALMADA AND TIRITO CONSOLIDATED SILVER MINING COMPANY.

The ninth half-yearly meeting of shareholders was held at the offices of the company, Finsbury-circus, on Monday.

Mr. PHILIP F. NEEDHAM in the chair.

Mr. H. G. DENNIS (the secretary) read the notice convening the meeting.

The report of the directors congratulated the shareholders on the large deposit of ore already found in the Mina Grande Mine. The Tirito Mine continues to yield large returns, and with the present favourable season for water the directors anticipate steady and increasing profits. The total value of the ores raised and prepared for market, either by concentration, cleaning, or amalgamation, for the six months ending June 30, was 124,937-16. The profit for October is the largest as yet made in any month since the formation of the company, amounting to 11,345-6. Some part of this profit is doubtless from Mina Grande ore, but not much, as Mr. Clemes has not yet decided on the best mode of treating the ores from that mine. The directors had hoped to have heard in time for this meeting the result of the experiment on lixiviation in the Mina Grande ores. The last news relative to such experiment is contained in a letter of Mr. Symons, an experienced assayer and metallurgist, who has the conduct of it, of Oct. 5. That gentleman appears to expect favourable results, although it is probable that there will be some loss of silver in the operation. Should the experiment prove successful, and lixiviation be carried out, the saving of cost to the company in realising the value of its ores will be very great. In connection with this subject, and with a view also to the saving of water, the directors have had under their consideration the purchase of a dry concentrating machine, which they think might prove a valuable addition to the company's plant. The question of water for the various operations carried on by the company continues to occupy the constant attention of the directors, and they think that the supply referred to by Mr. Clemes in the Santa Rosa Valley should be secured. This will only cost about 2,000l. They do not anticipate any great scarcity during the next dry season, as the rainy season this year appears to have been favourable for filling the wells. The directors, therefore, may reasonably expect a material increase of profits during the next year.

The ores sold since the last half-yearly general meeting have realised about the prices calculated by Mr. Clemes, but the directors hope that the ores now on the way will realise more than the estimates. The estimated net values of the ores now afloat by the Androklos, Memmon, and Pacha, and those awaiting shipment in Mexico was about 500 tons of ore, and was valued at 1,100l. The ores shipped by the Androklos in January, the freight of which will be 2l. 15s. per ton; and Messrs. Melchers, of Mazatlan, have written to Mr. Clemes, offering to take from 200 to 250 tons in addition about the beginning of the year.

Out of the 15,000l. 10 per cent. mortgage debentures authorised to be raised at the last half-yearly general meeting 10,500l. has been subscribed, leaving 4,500l. still to be issued. The interest on these debentures at the rate of 10 per cent. per annum will be payable on Dec. 31. The net profits for the half-year ending June 30 are 8019s., and the balance standing in the profit and loss account is 19,543s. As soon as the cargoes per Androklos and Memmon, and the 16,000l. (Mexican) recently remitted by Mr. Clemes, are realised the directors expect to be in a position to pay the dividend authorised at the last half-yearly general meeting. The delay in the distribution of the profits has been unavoidable, and solely the result of the ores now coming forward by sailing vessels via Cape Horn, instead of as heretofore by steam, the difference being four months at least in comparison with the time occupied by the steamers via Panama to Southampton. The saving of expense, however, is from 4l. to 6l. per ton, which is a very large percentage on the value of the ores. The directors now look forward to a regular supply of ores via Cape Horn, and congratulate the shareholders upon the favourable prospects of the company.

The report of Mr. J. P. Clemes, the manager, stated that the gross output of ores for the half-year amounted to 8053 tons, against 6341 tons the previous half-year. The yield of clean ores from the same was as follows:—Patio ores, 2090 tons; black ores, 1960 tons; black stone ore, 121 tons; and petanque, 1 ton. Net yield after concentration 1941 tons of patio ores, and 381 tons of ore for shipment. The average value of rough ores as sent to surface was 15s. 5d., against 13s. 4d. per ton the previous half-year, and of ore prepared for the stamps 22s. 9d. per ton, against 22s. 7d. the previous half-year. The value of the ores reduced here amounted to 995,590-73, and the ores prepared for shipment have an estimated net value of 329,412-37, free of packing, transport, freight, and sale charges. Total net value, 1,324,937-16. Working expenses, including machinery written off, 1113,690-69.

Profit, 111,345-69. Compared with those of the two preceding half-years the results are as follow:—

	June, 1873.	Dec., 1873.	June, 1874.
Half-year's credits	112,023-85	123,222-77	124,937-16
" expenses	97,174-41	90,487-50	113,690-69
" profits	14,849-44	32,735-22	11,345-69

As the net result compares so unfavourably with the previous half-years, and at the same time falls so much below the estimate given at the commencement of the period, it is more than ever necessary to explain the causes. The total net value of the produce remains nearly the same, but the ores raised to produce it amounted to 1712 tons more, an increase of production which entailed an increase of expenditure. That the increase of tonnage did not produce a corresponding increase of value was due to the coarser quality of the ores broken. The difference most apparent, however, is in the expenses. That amount includes 11,465 for machinery not applied at the close of the previous half-year, and written off this one, and 17246 for erection and expenses connected therewith, besides the increase due to increased output, the expenditure incurred in opening Mina Grande, and the cost of deepening and sinking wells, and pumping water during the dry season. The two amounts stated, together 18,711, properly belong to capital account, but in the absence of provision for that he has been obliged to charge it against ordinary revenue account. At the commencement of the half-year he had every hope of being able to exceed the estimated monthly profit of 8000l., having in view the help of some returns from the Mina Grande before the end of it arrived. The excessive want of water would in any case have prevented it, but, above all, the lower ley than expected of the Mina Grande ores deprived them of the hope they had entertained of being able to pull up for lost time, or to compensate within a limited period for the obstructions caused by the want of water, and for the expenditure incurred in forcing on the work of development in that part of the mine. And for the same reason the cost did not become less relatively to the returns towards the close of the half-year, as he had anticipated. They could have done better by respecting the number of hands during the dry season, and limiting the operations to working on the best paying parts of the lode, but that would have delayed the development at points where he expected good results, and, the workmen once scattered in search of work in other districts, he feared they might find themselves short-handed during the latter half of the year, and so prolong the bad effects of a period of exceptional difficulty.

Referring to the prospects, Mr. Clemes says that the black ores are obtainable from the Mina Grande, and from the slopes in the 10 and 20 m. levels, the latter, however, being rather poor. The slopes over the tunnel that formerly yielded the bulk of the black ore exported have almost ceased to yield any, having gradually changed to green ore as reported from time to time. From these points taken together we could largely increase the return, but as I have already explained in respect to Mina Grande ores, fine pulverisation is necessary, and as our present stamping power is already taxed to the utmost, and as it is not advisable to erect additional stamps until it be finally determined how to treat those ores, no large increase of returns of black ore can be looked for, although, of course, all that can be made marketable in a rough state will be so prepared, and will form some addition. The green ores are obtainable from the slopes in the 30 south and the 10 north, and from the slopes over the tunnel. These places a steady and paying yield of ore can be counted upon. Except such expenses as may be involved in the adoption of a new treatment of the Mina Grande ores, or in providing against the recurrence of such an extreme scarcity of water as we recently suffered from, nothing beyond ordinary working expenses can be anticipated. July month just ended shows a decrease of 10000 below the average, and we are keeping within as narrow limits as the scale of working permits. He had hoped by this time to have been able to promise a profit of at least 12,000 per month, and he should have been able to do so if the Mina Grande ores had only equalled in quality those we have hitherto exported. Under existing circumstances, however, and until they can see their way clearer with those ores, he cannot estimate for the current half-year an average monthly profit of more than 8000l. The country continues in a very peaceful condition, and they have never before had so abundant a supply of labour at this particular season of the year.

Prior to the commencement of the business of the meeting, upon the proposition of Mr. J. P. G. SMITH, seconded by Mr. T. B. POWER, the election of Mr. Philip F. Needham as a director and Chairman of the company was unanimously confirmed.

The CHAIRMAN said he found himself in a very onerous position, and the occasion he was very sorry for. He was sure that all who knew the late Chairman of the company would learn with regret that ill-health was the cause of his retirement, and in consequence had proceeded to Australia. For himself (Mr. Needham), the directors had conferred upon him the honour of appointing him their Chairman, and all he could say was that it would be his constant endeavour to promote the interests of the company. (Hear, hear.) He had upon this occasion very few remarks to offer, the report of the directors and that of Mr. Clemes really conveying all the information the board had to communicate. Mr. Breach, who had just returned from the mines, would afford any required details with regard to their position and prospects; and his friend, Mr. Morgan, would reply to any enquiry concerning the financial condition of the company. The directors had great reason to congratulate the shareholders upon the improved prospects of the mines, and particularly upon the improved position of Mina Grande, where there had been a sensible increase in the "ley" of the ores. The improved results were as follows:—

	Sept. 1873.	Oct. 1873.
Class B.....	123 1/2	158 1/2
Class C.....	100	108 1/2
Class R.....	None	130 50

This must be considered very satisfactory indeed. As stated in the report, the value of the ores en route was 5800l. Formerly all their ore came from Mazatlan overland to Colon, and from thence by steamer to Bremen or Liverpool, but they were now getting their ores via Cape Horn, the difference in freight charges being estimated at 4l. to 6l. per ton. Although it was impossible to overrate the importance of this difference, it was for the time causing inconvenience, as it made a difference of eight months in the time as compared with the overland passage. Allowing for the uncertainty of sailing vessels, and the variety in the periods of embarking the ore, they considered the difference of time nearly eight months. Therefore, this transition period of obtaining remittances from the mines made a difference of eight months, but when this time had passed they hoped and expected to receive regular shipments, via Cape Horn, at very diminished freight, compared with formerly. There were large quantities of ore ready for shipment by the Palmerston, and he believed they would continue engaging freight periodically; the 16,000 had arrived home by the Tasmania, and had been sold at a low price, but at the same time full market price. The value of silver in Europe had been very much depreciated of late on account of the changing in Germany of the silver for gold currency, and the large shipments to the East by the German Government had reduced the value of the dollar; unfortunately for this company, the last shipment arrived home at a time when they could realise only 56d. per oz. They had been hoping to receive some further information from Mr. Clemes concerning the lixiviating process upon the Mina Grande ores. A telegram had been received from him a few days since as follows:—"Lixiviation feasible—partial adoption recommended." They were in great hopes these ores would be in a great measure treated by this new process of lixiviation. Mr. Breach will go out again to the mines in January; Mr. Clemes' engagement with the company expires this year, and after Mr. Breach's return they expected Mr. Clemes would visit England, and the directors were very desirous to again secure his services, and would do all in their power to do so. The present half-year promised to be very much better than the last; there had been a very great fall of water, greater than for many years, and sufficient to fill up all the reserves. The question of water was of very great importance, and one which the directors had under their serious consideration. The new map on the wall showed the position of the Mina Grande, and what had been so far explored; of course, it was impossible to say to what depth it would hold. The directors in their report explained the reason the dividend recommended at the last half-yearly meeting had not been paid, but expected to be able to pay it as soon as the ores which were en route were received; the delay had been caused, as he had already explained by the mode of getting the ores home from the mines. That time must be tidied over, and once tidied over they were satisfied, if there was no unforeseen contingency, dividends would be declared regularly. He then moved that the report and accounts be received and adopted. Mr. MARTINEAU seconded the proposition.

A SHAREHOLDER asked when the dividend was declared?—The CHAIRMAN said the dividend was not declared, but only authorised at the last general meeting.

A SHAREHOLDER asked if there was any money in hand?—The CHAIRMAN said the balance at the banker's was 4000l., but that was never intended for the payment of dividends. It was money reserved for debentures. The directors considered that money was not available for dividend.

A SHAREHOLDER drew attention to the fact that 60 tons of the concentrated ore coming forward had been valued at 12l. per ton, while that sold had realised 40l. per ton.

Mr. MORGAN explained that in one item for concentrated ore the amount was 18l. per ton. The difference arose in the "ley."

A SHAREHOLDER said that sold had averaged from 37l. to 45l. per ton. The CHAIRMAN said the valuations were all Mr. Clemes'. All the ores from the mines were shipped by Mr. Clemes, and according to his valuation they were put down, and his valuations of the last four shipments had not varied 3 per cent. The ore coming by the Pacha was evidently of a very low "ley."

Mr. BREACH explained that the valuations by Mr. Clemes were all their net value.

A SHAREHOLDER said the very first item was 40l. per ton.

Mr. BREACH said that was Tirito ore.

The CHAIRMAN said the estimated price was per American ton, which made a difference of 10 per cent.

Mr. MORGAN explained that it was partly owing to the latter ores coming from

Mina Grande and the former having come from Tirito. The latter ores were capable of very much higher concentration than were the Mina Grande, which were to a great extent lead ores.

The CHAIRMAN, in reply to a question, stated that the debentures had been issued at par for seven years; there was still a small amount to be issued. They were payable in instalments of 20l. per cent. by drawing.

The report and accounts were received and adopted. Mr. MEE proposed that the best thanks of the shareholders be given to the Chairman and directors.—Mr. JOHNSON seconded the proposition, which was put and carried.

The CHAIRMAN said that on behalf of his directors and himself he begged to return the shareholders their best thanks. He could only assure them that every effort would be continued to promote the prosperity of the company, and he hoped the next time they met he should have the pleasure of placing before them some very good news.—The meeting then separated.

KINGSTON VALLEY LEAD MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Gresham House, Old Broad-street, on Tuesday.

Mr. S. F. PORTER in the chair.

Mr. D. FORREST (the secretary) read the following notice convening the meeting and the reports of Mr. Thomas Sopwith, jun., and of Captains James Secombe, Thomas Richards, Henry Rodda, and James Richards were submitted:—

From the reports of practical men, and from repeated personal inspections, the directors are convinced that the company is in possession of a mine of an exceptionally valuable character. Ore ground has already been laid open, containing large quantities of silver-lead ore, which has been proved from assays by the first assays of the day, to be remarkably rich in silver. A considerable quantity of ore has been raised, and it only requires the outlay of capital to make the property a good and permanent dividend-paying mine within a very short time. Mr. Thomas Sopwith, jun. (whose report was published in full in the Journal of Nov. 21) states that "the funds of the present company have been judiciously expended, and it is evident that great economy has been exercised." The whole of the shareholders' money has been laid out in developing the mine—the directors, manager, and secretary all looking to the future for remuneration, and making no charge even for office expenses until the mine is a success.

Capt. James Secombe, after referring to the various points of operation, reports that there is a decided improvement in the general character and value of the lode from the adit to the 16, and strong indications of further increase in richness as greater depth is attained. Therefore, he advises that, in addition to laying open the lode in length, arrangements be made for resuming the sinking of the shaft as soon as possible, believing that if this mine be worked with energy you have every prospect of speedily rendering it a profitable property.

Capt. T. Richards, of Kingston Down Consols, was pleased to say that the good opinion he had already formed of the property was far more than realised. The very large and masterly lode, the silver-lead ore it already produces at such little distance from the surface, together with its general composition, in many respects resembling that of the Dividend lead mines of the Liskeard district, with which for many years he was connected, all tend to justify him in believing that at no great increased depth something unusually good will be met with.

Capt. Henry Rodda, of Devon Great Consols, reports that in the adit level there are three cross veins or lodes intersecting the main lode, these intersecting being a cross course of very large size, containing quartz, gossan, and a mixture of silver-lead ore, a slide, and a very large, well-defined lode, the latter especially being a highly desirable feature in connection with the lode. The lode is of a highly mineralised character, and of masterly size, the country through which it passes is of the most congenial nature for the production of mineral, and altogether this is unquestionably a great and important discovery. The great lead-bearing district of Menheniot, only a few miles distant, is characterised by indications remarkably similar to those in this mine, and he feels confident that the prosecution of the works here cannot fail to be attended with similar remarkable results. In conclusion, he would strongly recommend the prosecution of at least a 40-in. pumping-engine, the sinking of the engine-shaft, and the prosecution of other desirable points, and, as before observed, he is firmly of opinion that these operations will lead to the opening up of a great and lasting mine. There is already at surface 30 tons of silver-lead, dressed and ready for sale, besides a large quantity of blende.

Capt. James Richards, of Devon Great Consols, was most favourably impressed with the masterly appearance and great strength of the lode throughout the whole of the workings, and goes to state that it undoubtedly possesses the true features of a great lead-bearing lode, being rich in silver and strongly mineralised, with a large quantity of gossan, carrying also in abundance of capel and a large proportion of carbonate of lead, forming altogether great strength and durability of character. A large and valuable lode has gone down in the bottom of the adit level, and in the 18 below—the deepest point reached—an important improvement has taken place, such as he had rarely, if ever seen, in the early stages of development of any mine. The produce of silver-lead, carbonate of lead, and blende ores from the present workings is considerable, as may be viewed at the surface, and the lode in the present end and in the rise in the back of the 18 will yield large quantities of lead and blende ores. On a previous occasion he was very much struck with the appearance of the lode at surface, and the remarkable congenial nature of the country through which the shaft was then being sunk, as well as with the lode courses and the large cross-course coming in contact with the lode, and these indications having already led to the discovery of a course of silver-lead, he has no hesitation whatever in expressing his opinion that the extension of the workings will lead to the laying open of a great mine.

Assays by Messrs. Johnson, Matthey, and Co. give from 16 to 76 per cent. for lead, and 9, 13, 27, and 226 ozs. of silver per ton of galena. Mr. T. Harvey, of Tavistock, found 7 1/2 in 20 for lead, and 185 ozs. of silver to the ton, and Mr. T. M. George, of Liskeard, found from 34 to 47 ozs. silver per ton in the leadings.

The CHAIRMAN said they had expected to receive a better response from the shareholders, but regretted to say that out of the 8000l. offered for subscription only about 800l. was applied for and allotted, and he might remark for the information of those shareholders that did subscribe that no allotment would have been made had they not been assured by two other shareholders that they were prepared to take up every shilling of the capital not applied for otherwise. They failed, however, to complete their promise, and the directors had, therefore, to turn to other quarters, obtained another promise, but were again disappointed, and now, as a last resource, placed the matter before the shareholders. The directors had endeavoured to keep them fully informed of everything since the company was established, and they had at least the satisfaction of knowing that not one penny had gone into the pocket of anyone, and that no office rent or anything, except postages and such like, had been charged. He would like the shareholders to give them some hint as to what they should do. Mr. G. F. Richards was present as a shareholder, though not as their engineer, for the company did not pay his expenses for coming up, but he would, doubtless, give them every information in his power.

Mr. G. F. RICHARDS had really nothing to add as to the mine beyond what the shareholders already knew; it was still looking exceedingly well, and the reports accurately described the present position of the mine. They had driven 30 fathoms west of the main cross-cut from the engine-shaft; they had risen 12 fathoms in back of the 18 m. level, and sunk 5 fms. in the bottom of the adit level; in both points the lode had been good, and almost continuous, and there remained about 5 or 6 fms. to drive to communicate with the two points. He might say that the present appearance of the mine warranted its being further developed; the shaft should be sunk and the ore ground opened out systematically, and made ready for stopping away.

Mr. ENGELBACH (a director) said that one reason for calling the shareholders together was this. The directors were all prepared to go on provided they had the co-operation of their fellow-shareholders. They were not mining gentlemen themselves, but Mr. Sopwith (whose name was probably known to them all) and Capt. Secombe had been there, and reported favourably. It had now, however, come to this—Should they continue to work a good property, or should they abandon it?

Capt. JAMES SECOMBE went to the mine in the first instance out of curiosity, having requested Mr. Gibson to send him an order to examine the mine. The directors happened to be there at the time, and he need not say more of his opinion of the mine than that after his visit he bought shares; he was satisfied that if they had money to develop it properly they would have a great mine. He had never seen anything at so shallow a depth that held out better prospects. If he might venture to offer a suggestion he would say appoint a committee to consider what the directors as to the best means of getting the money for the future; he thought that if the shareholders would appoint two or three of their number to act as they proposed they might get the money, and he believed they would have success.

The CHAIRMAN said that so far as the board was concerned they would be happy to have two or three more gentlemen to consult with.

Mr. JOHN D. ROSE understood that they had been twice disappointed in getting the money, although the promises were distinctly made. He would like to know the reason of the failure. He could quite understand that if the shareholders showed no disposition to take up the capital the outside public would not come in. It might be thought that the company was too heavily weighted; he would, therefore, ask what proportion the subscribed capital bore to the nominal capital?

The CHAIRMAN explained that the capital of the original Kingston United Mine was 40,000l., of which sum 20,000l. was subscribed, 16,000l. being paid in shares for the mine. The remaining 4000l. was paid up, with the exception of only 91s., which was considered good. They thought they had got hold of an extremely good thing, and additional capital being required they called the shareholders together to consult as to the best means of getting the money for the future. They wound up the old Kingston United Mine, and commenced the new company, the Kingston Valley, making the nominal capital 50,000l., of which 40,000l. was appropriated to the holders of shares in the Kingston United, giving an additional 10,000l. for working capital. The 8000l. which they had tried to put out was part of that 10,000l., and of the 40,000l. each person holding shares in the old company received his proportion. What the directors now proposed to do was to issue the 8000l. as 12 per cent. preference shares, and to hold the same number of ordinary shares, so that the preference shares could be exchanged for ordinary shares, at the option of the holders, if the dividend on the ordinary shares exceeded 12 per cent. The 8000l. which had been subscribed out of the 8000l. they proposed to convert into 12 per cent. preference shares, at the option of the holders.

Mr. ENGELBACH explained that at least 4000l. would be required. Practically, he said, the board had more money in the company than all the other shareholders put together.

Mr. ROSE thought it was generally considered that the concern was too heavily weighted. He knew many would not buy in. If the concern were on a fair basis, the CHAIRMAN believed the mine would ultimately be of great value, and those in the neighbourhood were of the same opinion, which they backed up by taking shares. The expenses were 150l. to 200l. per month, but lately it had been 250l.

per month, in consequence of the high price of coal and the more extended workings. They were cutting ore of good quality.

Mr. ENGELBACH said they had a large amount of ore at surface which could not be sold to advantage in its present state, and they could not satisfactorily dress it until they had 1000 ft. for dressing machinery.

Mr. RICHARDS and Capt. BECOMBE expressed the same view as Mr. Rose with regard to the concern being too heavily weighted, but thought there would be no difficulty in making an equitable arrangement, and ultimately Mr. Rose, Mr. Richards, and Capt. Becombe were appointed a committee to confer with the directors as to the best course to adopt under the circumstances.

Thanks having been unanimously voted to the Chairman and directors, the proceedings terminated.

LLANRWST LEAD MINING COMPANY.

The first annual general meeting of shareholders was held at the mine, Llanrwst, on Monday.

Captain GILBERT in the chair.

The secretary read the notice convening the meeting, and the necessary number of shareholders being present, in accordance with the Articles of the Association, the Chairman declared the meeting duly constituted.

Capt. Knapp (Dec. 19) reported that the character of the mine as previously represented had been fully sustained during the current year, and that the future prospects are still as good as they were. It is important to notice here specially that whatever the mine was and has been during its possession by the present company, it is now, with all the additions which have since been made to it, both in the extent of ore ground laid open and the preparatory outlay which has been made for permanent and effective operations, as all the ore which has been discovered and broken is still on the mine. Their arrangements have all been made with reference to the unquestionably permanent character of the mine and its confidence-inspiring prospects. Since the statutory meeting they have projected and sunk a new engine-shaft perpendicularly 20 fms. 2 ft., 10 ft. by 8 ft., 7 ft. within the timber, and substantially divided and cased it from the adit to the surface, fixed ladders, erected horse-whim, &c. They have also sunk a new whim-shaft 15 fms. 3 ft. from the surface to the 10 above the adit. This shaft was required in consequence of the extension of the ore ground eastward, beyond where they were at the last meeting. This shaft struck the lode about a fathom before reaching the 10, from which point downwards there is a good lode, yielding $1\frac{1}{2}$ ton of lead per fathom, and in ground favourable for progress and produce. The cross-course heaves the lode northward about 7 or 8 fms., and they are now driving at 31. 10s. per fathom in that direction, and expect in about a month to reach the lode, and find it good. So soon as this end is extended sufficiently they shall commence to sink it to the adit, and expect to open a rich piece of ground. They have not yet cut this lode at the adit, near the great cross-course, but expect to do so in a short distance further driving. They are driving towards it, and, from the favourable appearances, expect to reach it shortly.

The new shaft is already in order for drawing from the 10 fm. level, and largely expedites progress, and when they get it to the adit rich ore ground will probably be laid open, and the full ventilation will be supplied to that part of the mine. They have also driven 32 fathoms 1 foot 9 in. of cross-cut, besides extending 54 fathoms 2 feet 3 in. on the course of the lode, and 20 fathoms of winzes. The miscellaneous work has been of the usual kind, and far too multifarious to specify in detail. All in this department has been well executed. They have laid open more than 100 fathoms in length of good paying ore ground, whilst a large proportion is exceptionally valuable, yielding in places 2, 3, 4, and in one place 6 tons per fathom, most of which is still standing and ready to be taken away as soon as dressing appliances can be arranged and operated. They have about 160 tons of lead at surface from exploratory operations alone, and a prospect now of opening up a longer and still richer section of ground beyond the great cross-course eastward to the extremity of the sett. They expect to be shortly into this ground both at the adit and the 10 fm. level above, laying open ground of equal value, but with greater dispatch. They have an adit going into the eastern ground 20 fms. east of the great cross-course, and through only 3 fms. deep they are raising some fine ore, and both the lode and ground are looking well. They will be ready in the spring to erect the necessary machinery for further developing the mine in depth and making its great resources available, immediately after which returns can be made on a scale to yield handsome profits. The mine never looked so well as at present, and his conviction as to its value was never so strong as it is now.

The accounts from the commencement of the company to November 30, and the balance-sheet duly audited, were submitted and adopted.

The Chairman said they had all heard the captain's report read, and which seemed to be very satisfactory, and the accounts and balance-sheet being laid before the meeting had been adopted, all present can now view the property which is really the object of holding this meeting on the mine.

Mr. SHARP was re-elected the company's auditor, and 71. 7s. voted to him for past services.

The Chairman stated that all the directors now tendered their resignation, but he and his co-directors were so satisfied with the mine and the future prospects of the company that they were ready to accept office again if the shareholders present thought fit to elect them.

Capt. A. S. Gilbert and Messrs. George Benetofski, B. J. C. Holden, and George B. Gregory were re-elected.

Thanks were voted to the Chairman and directors, and a vote of confidence having been awarded to Capt. Knapp, the proceedings terminated.

WHEAL JANE MINING COMPANY.

The quarterly meeting of adventurers was held at the mine on Tuesday, Mr. CHARLES HAWKE, the purser in the chair. The labour costs for the three months ending October were 1507l. 19s.; merchants' bills, 578l.; lord's dues, 198l. The credits were, arsenic, 3l.; mundie, 52l.; tin, 10,843l. 17s.; carriages on ores, 38l. 18s.; balance from last account, 685l. 11s. 7d.; showing a profit on the three months' working of 1445l., leaving a balance in favour of the adventurers of 2150l. Out of this the Chairman proposed to declare a dividend of 1l. per share, which would leave 82l. to the credit of the shareholders. In addition to this, they would have to deal with 46 relinquished shares, which would give them 200l. more, and he thought this would be a very good balance to their credit. The auditor certified that the result of the action taken by the committee in advising the adventurers to stock their tin from Oct. 28 had been a profit of 480l., owing to the increased price obtained, and that there had also been a surplus of 4 tons of tin sold for 221l., beyond the quantity estimated in the accounts, as ready for sale.

The agent's report was very satisfactory, and concluded by saying that the machinery was in good working order, and that, with a small further advance in the price of tin, they were safe in saying they had a good and profitable mine before them, and that the dividend to be declared that day was a sufficient guarantee that the mine was a credit to the adventurers, and no disgrace to the agents.

Capt. GILES, the manager (in reply to an adventurer) said they were increasing their reserves.

The report was adopted, and a dividend of 1l. per share declared.

The Chairman then proposed that the 46 shares which had been relinquished some twelve months ago should be sold by auction. They were now worth from 4l. to 5l. per share, and he thought it was a good opportunity of disposing of them, and he moved that they should be sold at the Red Lion Hotel next Saturday week, by Messrs. Clyma and Mayne.—The motion was carried unanimously.

Mr. LOWRY, an old adventurer in the mine, then proposed a special vote of thanks to the purser, and managers, and the committee for their services, and for the discretion which they had shown in the management of the mine, particularly in the stocking of the tin, which had resulted in a considerable profit, and for having successfully dealt with the many difficulties which had to be met during the late depression in mining. This was seconded by Mr. Tresidder, and carried unanimously, and after an acknowledgment from the Chairman, the proceedings terminated.

WEST WHEAL TOLGUS MINING COMPANY.

A largely attended meeting of adventurers was held on Saturday, Major HAYE presiding.

The two-monthly account showed a substantial balance in favour of the concern, and a satisfactory dividend was declared. During the two months of September and October there were 607 tons of copper ore sold, realising 3096l. 2s. 7d.; less dues to the amount of 97l. 13s., leaving 3008l. 9s. 7d. The labour cost for the four weeks ending September was 881l. 11s. 11d., and for October 865l. 7s. 1d. The thirteenth month's working was also included, to the amount of 893l. 5s. 4d., but of this only 273l. 5s. 4d. had to be charged to this account, 620l. having already been charged. The merchants' bills were 1131l. 10s. 9d., and after paying off all liabilities there was a profit on the two months' working of 656l. 14s. 6d. This, added to the balance in hand of 237l. 14s. 11d., made a total balance of 894l. 9s. 5d.; and out of this it was now proposed to declare a 1l. 5s. dividend, leaving 254l. 9s. 5d. to the credit of the next account. The agent's report was read, as follows:—

Since the breaking of the last rod the water was up $2\frac{1}{2}$ fms. above the 95, thus showing it was 3 fms. below the 105. If the weather prove to be dry for a short time, we calculate on getting the water in fork by the end of next week. The 126 has been driven 2 fms. since the last meeting. The lode is larger than it was at that time; it is $3\frac{1}{2}$ ft. wide, yielding 4 tons of good ore per fathom, worth 30l. per fathom. There are two stops in back of the 125: the one east of No. 2 rise will yield 10 tons of ore, worth 80l. per fathom. The lode in the 115 west is $2\frac{1}{2}$ ft. wide, and will yield 2 tons of ore per fathom. We expect the lode to rise from the back of this level to the winze below the 105 in a day or two. The lode in both the 105 is 2 ft. wide, principally peach, with a little ore, but nothing to value. The lode in the 95 west is 6 ft. wide, spotted with ore throughout. Yesterday there was a change in the lode, which gives us hope that there is a good lode close at hand. It will now yield 1 ton of ore per fathom. The lode in the 85 west is 6 ft. wide, yielding 6 tons of ore per fathom. The lode in the winze below the 85 (which is 8 fms. below the 95 end) is $4\frac{1}{2}$ ft. wide, yielding 7 tons of ore per fathom, worth 50l. per fathom. There are three stops in back of the 85 yielding together 16 tons of ore per fathom, worth 7l. per ton. The lode in the 75 end west is 2 ft. wide, composed of spar and peach.—Richard's Shaft: This shaft is nearly 4 fms. below the 65. The lode in the 65 west is 2 ft. wide, hard and poor. The lode in the 55 east end is small and poor. The lode in the 40 is 3 ft. wide, yielding 3 tons of ore per fathom. The stops in this part of the mine were stopped two months ago,

and set on tribute, as we thought that the ground could be worked more advantageously in this way. Our returns for the next two months, after deducting the dues, amount to 4102l. 5s. 8d. This, we calculate, will leave more profit than our books show to-day. We have sampled 237 tons of ore for the first sale for the January and February account.

The Chairman, in proposing the dividend, referred to the prosperous condition of the mine, especially in regard to the 95.

The accounts were passed, and the dividend declared, and the meeting, which lasted but a few minutes, thereupon terminated.

DOLCOATH MINING COMPANY.

The twelve-weekly meeting of adventurers was held, on Monday, the Rev. W. W. BUTLIN, one of the committee, presiding. The accounts showed that the labour cost and merchants' bills up to Nov. 28 amounted to 13,466l. Copper ores had realised 296l., and the tin ore 16,870l. A dividend of 12s. 6d. per share would take 2685l., leaving a balance in hand of 301l. The report of the agents was as follows:—

The engine-shaft is sunk 10½ fathoms under the 314; the lode is worth for the length of the shaft (12 feet) 100l. per fathom. Another part is standing to the north, which we shall cut through when the 320 is reached, which will probably be the end of the account. The size under the 314 east of engine-shaft, is sunk 7 fms. on the south part of the lode, which contains a little tin; the rich part of the lode is standing to the north. The 314 fm. level, west of engine-shaft, is worth 80l. per fathom. We have commenced to sink a winze under the 302 just over this, where the lode contains a little tin, and on being sunk deeper is likely to improve. The 314, east of engine-shaft, is worth 100l. per fathom. The 302, east of new east, is producing a little tin. The 302, west of old sump, is worth 20l. per fathom. The 290, east of new east, is worth 20l. per fathom. The 290, west of old sump, is producing a little tin. The 275, west of old sump, is worth 10l. per fathom. The 268, west of old sump, is producing a little tin. Harriett's shaft, which is not on the lode, is sunk 8 fms. under the 248 fm. level. The 248, east of Harriett's, is producing a little tin. The 248, west of Harriett's, is worth 20l. The man engine-shaft, which is just before this end, is sunk 7 fathoms under the 335, and is worth for 9 ft. long 30l. per fathom. The 236, west of Harriett's shaft, is unproductive. The winze under the 224, west of Harriett's, is worth for 9 ft. long 20l. per fathom. The winze under the 212, west of Harriett's, is worth for 9 ft. long 30l. per fm. The winze under the 215, east of Stray Park, is worth for 9 ft. long 15l. per fathom.—Capt. THOMAS, Capt. W. FROVIS, Capt. J. TOWKIN, and Capt. J. BAWDEN.

The Chairman, after the report and accounts had been unanimously adopted, said there was no need for him to make any observations, as the mine told its own tale very well indeed. There had been no rise in tin since the last account, and yet they were able to present them with the excellent Christmas-box of 12s. 6d. per share. He was not aware until that day that they could pay so much, and they must consider they were doing exceedingly well at such times as the present. Dolcoath Mine was A 1, for no other mine could be called at all equal to that, and well as they now stood he hoped they would do still better. They wanted a rise in tin, and it was astonishing they had not had it before. (Hear, hear.) The *Mining Journal* stated that there was a large demand from America, and, therefore, they might fairly look for a rise soon. It seemed to him that in England during the whole of the year nothing had done well. Things had almost all been low, and in foreign countries a similar state of things prevailed. But they must be thankful for their mine, in which all charges up to Nov. 28 had been paid, and now it was only Dec. 21. He thought they must be much obliged to their agents for the kind attention they had given to the interests of the mine.

Capt. RABLING, noticing a charge for Vice-Warden's assessment, asked if this was a quarterly or annual payment?—Capt. THOMAS: Quarterly.—Capt. RABLING: Of what is it composed?—Capt. THOMAS: A farthing in 1l. upon all returns. All the mines in the county pay the same.—Capt. ROWE: Is that called up every quarter?—Capt. THOMAS: Yes. They used frequently to remit it in years gone by, but now they call for it every quarter. A SHAREHOLDER supposed that the Vice-Warden's assessment was a SHARROW, and that they do not give any account of the money.

Mr. RULE asked the average price of the tin sold?—Capt. THOMAS said they had sold 291 tons in the 12 weeks for 16,870l., which would be about 58l. per ton.

Capt. ROWE: What do you get for your best parcels?—Capt. THOMAS: We have not sold our best lately, but the last we sold made 60l. per ton; the common fetched 57l. 10s. Proceeding to address the meeting, Capt. Thomas said he, with the Chairman, was pleased at their being able to give the adventurers a 12s. 6d. dividend instead of 10s., which they paid last time. With the present price of tin and materials there were very few mines in the county which could fairly make any profit, and if things continued as they had been during the last 12 months mining generally would be in a worse condition than it was now. There was no use hiding the fact that most mines had reduced the tutwork operations as far as possible to keep down their cost to the lowest possible extent; in fact, with most mines it had been a severe struggle to exist during the past 12 months, and if matters were to go on in this state for 12 months longer of course it would tell very adversely on the mining interest of the county. He was happy to say that, although in that time they had reduced their cost something like 2000l., a quarter since tin had declined so much in price, they had not stopped any important tutwork operations. They had never sunk a shaft faster, nor so fast; they had never opened the bottom of the mine so rapidly as they had done during the past 12 months. In the past 12 weeks they had sunk 3 fms. under the engine-shaft under the 314, which was very good, considering the time of year and the hard ground they had. They tried to encourage the men as much as possible by giving them a good price and long "extras." They found the men worked very hard, got good wages, and he believed that policy was the best for them and for the adventurers. The new section of the mine that had been prepared was a great improvement on the old one. The old section was only from the 170 downwards, and he thought the adventurers would be pleased to see the exact state of the lode from the surface to the bottom. The present section showed the copper workings, the place where copper declined, where the lode produced a little both of tin and copper, and also the tin workings and depth. They would see also that in the eastern and western parts of the mine there were large pieces of ground yet unsunk, and he had reason to doubt that those parts also contained large deposits of tin, the western part especially. West of Harriett's shaft they had opened, on the whole, exceedingly well. During the past 12 weeks they had raised and sold 291 tons of tin, and anyone unacquainted with mining would scarcely think that the amount of labour involved in raising such a quantity of tin from such a depth was so great. In order to raise that quantity they had had to raise and stamp more than 13,000 tons of stuff in the 12 weeks; and when they considered how hard the lode was, and what depth they were working at, they saw what a vast amount of work must be done to produce such results. The tin, in fact, on the whole, was only worth 25s. per ton at the price of tin, and to make a profit of something like 1000l. per month, with the price of tin and materials, must prove that they were doing exceedingly well. It showed the mine must be a very good one; and he hoped, with the Chairman, that with the new year they would receive improved prices for tin. There was every probability of it, and if this took place of course their profits would be very largely increased. (Applause.)

Capt. THOMAS, in answer to Mr. R. Rosewarne, said coals were now bought at a much less cost; iron and other goods were a little cheaper. They were now paying 19s. 6d. per ton for coal; they had paid 25s., and formerly they got it for 13s. per ton.

Mr. RULE thought at Dolcoath they were making a better price for tin than any mine in the neighbourhood.

Capt. THOMAS: I think we are. I never sold any for the last six months without being 1l. above the standard, and generally 2l.

Capt. DAYE moved a vote of thanks to the Chairman and agent, and remarked on the wonderful character of the report and the good dividend, which he hoped would continue for a long time to come.—The Chairman briefly replied, and the proceeding terminated.—*Western Morning News.*

CWM DWYFOR COPPER AND SILVER-LEAD MINES.

The following report by Captain Jewell of the operations at these mines for September, 1873, to the end of November last, was read at the meeting of the shareholders, held on Dec. 18, the details of which appeared in last week's *Journal*:—

Cwm Dwyfor Mines, Dec. 3.—In submitting to you my report of the operations since the date of the last general meeting it will be unnecessary for me to enter into the details of the character of the mine, as you are from previous reports well acquainted with the geological position of the property and its mineralogical merits. South Cross-cut: This cross-cut has been extended since the last meeting 15 ft., making the total distance driven south from the main shaft 17 fathoms. By this extension the No. 4 south, or great silver-lead lode, has been intersected at a distance of 15 fms. from the said shaft.—No. 1 Level East: We have driven this level 11 fms. 1 ft. on the course of the No. 4 lode, and have found that it varies from 1 ft. to $3\frac{1}{2}$ ft. in width, yielding in some parts $1\frac{1}{2}$ ton of copper ore and 10 owt. of lead ore per fathom. Our progress, owing to the hard grit rock we are driving through, is necessarily slow; but, from present appearances, I expect shortly to see a change in the ground for the better. We have about $3\frac{1}{2}$ fms. more to drive to reach the little shaft sunk in the open cut. You may depend on the driving of this level being carried on with all speed. The lode in this level is split into two parts; the north, or copper part, is about $1\frac{1}{2}$ ft. wide, spotted throughout with copper ore of good quality, iron pyrites, &c. The south, or lead part, is 6 in. wide, composed of chlorite, quartz, &c., and carrying a rich rib of silver-lead. The level has lately improved very much in appearance, and we have just met with a cavity or vugh in the lode, which is a very favourable indication. We are also now in close proximity to the slide observable in the open cut, and I have no doubt that the lode will be found to be continuous with the slide that the largest and most continuous deposits of both copper and lead ores are found, and although the lodes are subject to great disturbances in their course through the strata, yet when these slides come in contact with the lode, striking it at an angle of from 5° to 30°, there is all but an absolute certainty of cutting into rich courses of lead and copper ores.—No. 2 Level East: This level has been extended about 8 fms. on the course of No. 3 lode (south cross-cut). The lode in the present end is $2\frac{1}{2}$ ft. wide, and carries on the north wall for the whole length of the drive a rich leader of solid lead ore, and also on the south side stones of good copper ore. This lode presents a very kindly appearance. There are two other copper lodes intersected in this cross-cut, but no further work has been done on them as yet. I may here remark that these two lodes where intersected were valued at $1\frac{1}{2}$ to 2 tons of copper ore per fathom respectively.

Stopes on No. 4, or Great Silver-Lead Lode: The stopes at surface east and west of the little lead shaft sunk in the open cutting on this lode will produce fully 1 ton of lead and copper ore per fathom respectively. About 6 fms. east of the eastern stope the lode will yield from 2 to 3 tons of lead and about 1 ton of copper ore per fathom. The formation here is grauwacke, which augurs well for the level we are now driving under this open cut.

North Cross-cut: This cross-cut has been extended 7 fms. 2 ft., making a total distance north from the main shaft of 20 fms. 2 ft.; by the extension the No. 4 north, or old lead lode, has been intersected at this point. There are three other copper lodes intersected in the driving of this cross-cut, one valued at 2 tons of copper ore per fathom, and the other two contain copper ore of good quality, but no further work has been done on them.—No. 1 Level East: We have driven this level 9 fms. 6 in. on the course of No. 4 north, or old lead lode; the formation is clay-slate for the whole length of the drive. The lode averages about 5 ft. wide, and produces splendid rocks of copper ore and sulphur, with occasional stones of lead ore—a very strong and masterly lode, which, in my opinion, cannot fail in making large bodies of rich ore. We have about 5 fms. 5 ft. more to drive this level to communicate with the shaft sunk from the surface by the old men, where the lode is 7 ft. wide.

No work has been done on the upper, or north copper mine, since the date of the last report. I have carefully examined this part of the mine, and find that the three lodes discovered, and proved metalliferous, are, in my opinion, well worthy of being vigorously worked on, as it is evident that a large quantity of copper ore has been raised from this part of the property.

The driving of the deep adit level under the present bottom of the mine (a very important work) has also been for the present suspended, owing to the scarcity of, and the high wages demanded for, labour; this will, however, soon be remedied by the opening for traffic of the Gorsedd Junction and Portmadoc Railway, which is now nearly completed to within less than a mile of the mine, when we hope to see labour cheaper and the necessary machinery brought on the mine for dressing the large piles of lead and copper ores on the floors (to which we are daily adding), so that they may be sent to market.

It only remains for me to add that the lodes in the lower mine are eight in number—six copper and two lead—all parallel, and within a breadth of 37 fms. 2 feet, and all of which I recommend should be driven on. In the upper mine the lodes are three in number, all containing copper of good quality, and within a breadth of 20 fathoms.

I reiterate that I have not a shadow of doubt of the success of the undertaking, and I trust that we may soon be enabled to carry on our operations with vigour, as I feel confident we shall open out a lasting and profitable mine.—J. JEWELL.

MALPASO GOLD WASHING COMPANY.

A general meeting of shareholders will be held at the offices, on Tuesday.

The report of the directors (to be submitted) states that they have much pleasure in calling attention to the fact that the preliminary work of running a cut up to the main banks, has at length been accomplished, and also that a permanent supply of water has, for the first time in the history of the company, been brought on the mine. The amount expended since the last meeting has been (less amount of gold obtained) 4308l., which amount the directors propose to write off to capital account. The returns have been 453 ozs. of gold, realising 1858l. This has been obtained from 1448 hours washing on pay-dirt with an average head of water of 218 inches. During the period embraced by the accounts the work has continued to be of an entirely intermittent character, the new water supply having only become available on Sept. 12.

At the last annual meeting it was determined to raise additional funds for the purpose of bringing on a permanent water supply, and an issue of 10,000l. in preference shares was subsequently authorised. Of this issue 7500 shares were subscribed. The amount raised by the issue of these shares has proved ample for the purpose of carrying the sluice up to the main banks, and also for making a new ditch carrying 1000 to 1500 inches from the River Malpas to the River Cantarera, from the latter of which the present Malpaso ditch takes its supply. The work now remaining to be done consists in bringing in a new ditch, from the Cantarera river to the mine, in addition to the present one, which carries at best 300 inches to 400 inches of water, and which is liable, owing to its steep grade, to constant breakages. The new ditch is already levelled, and an embankment made for the whole distance. It has, however, been deemed advisable to demonstrate by the aid of the present ditch, the paying capabilities of the property, before proceeding to construct the new one; meanwhile it is very satisfactory to know that for the future the water supply at the mine will be continuous for the whole year, and that the funds at the disposal of the directors are considered ample for bringing in the new ditch. The sluice has now reached the main banks, which present a cliff of auriferous gravel 230 feet in height. Washing on this bank had only just been fairly commenced when the last mail left, and the directors believe that the first steady run thereon will fully prove that profitable results can be obtained.

Although, owing to unforeseen circumstances, the opening of the mine has been very much delayed, and much disappointment has been caused thereby, yet they have the utmost confidence that the date at which the new and continuous supply of water was brought on—Sept. 12—will mark the beginning of a new and prosperous career for the Malpaso Company.

RICA GOLD WASHING COMPANY.

A general meeting of shareholders will be held, on Tuesday, at the offices of the company.

The report of the directors (to be submitted) states that in view of the very great difference, which has thus been proved to exist between the original reports on the water supply, and the actual results obtained, the directors have received an explanation from Mr. W. S. Welton (Mr. Clarke having left the company's service). The company would not have drifted into its present position had their superintendent, who had been appointed on account of his practical knowledge of the subject, taken due and proper care to verify beyond all possibility of doubt the representations made as to the volume and permanence of the water supply, on which the success or failure of the undertaking must eventually depend.

It may be useful to compare the results, thus far obtained, with those of the best class of hydraulic mines in California, of which the Sweetland Creek may be taken as a type. From the commencement of washing at the Rica Mine up to the date of the last clean up on June 15, a period of something over twelve months, 8,995 was obtained in 774 hours washing with 109 in. of water, being equal to 33 days of 24 hours each. The last run at Sweetland Creek gave a gross return of 854,615, washing 65 days with 1500 in. of water, showing, when reduced to the same basis as the Rica, for 33 days of 24 hours for each 100 in. of water, a gross yield of \$1390 as against \$2995 obtained at the Rica. Considering, therefore, that the actual results hitherto obtained fully confirm all that has from time to time been stated as to the richness of the gravel deposit, it seems clearly established that with a moderate and continuous head of water very large profits may be realised.

It is a great satisfaction to know that additional water can be obtained if the necessary funds can be raised. The monthly cost of the mine has long since been reduced to a minimum, and the directors have not received any fees since the formation of the company. The Malpaso property, after passing through similar vicissitudes to those which are attending this company, has at last been furnished with a continuous supply of water. It may, perhaps, be considered advisable before endeavouring to raise additional capital to wait until the results, which, it is believed, will now be obtained at that property are such as to remove any doubts which may exist in the minds of some shareholders as to the paying capabilities of the deep layers of the United States of Colombia. The vendors will be quite prepared to assist in raising the capital necessary for bringing on an additional water supply whenever such a course shall be determined on.

PRUSSIAN MINING AND IRONWORKS COMPANY.

(PREUSSISCHE BERGWERKE UND HUTTEN-ACTIEN-GESELLSCHAFT.)

At the annual general meeting of shareholders, held at Düsseldorf on Dec. 12, of which only partial details were given in last week's *Journal* (the translation of the President's address having been delayed in the post), the President (Mr. W. T. MULVANY) observed that the fact of the company not paying a dividend for the last business year, coupled with the serious responsibility of his position, made it his imperative duty to express shortly his views as to the general causes which have affected many of the industrial companies in Prussia, and the special causes which have injuriously, and for this period exceptionally, affected the company. As to the general causes, he remarks that they have passed through a double crisis—1872-3 and 1873-4—which has affected the coal and iron trades not only of Germany, but of England, Belgium, France, and America; and that the agitation for increasing railway freights on raw materials in Germany in 1873-4, and the departure from the recognised policy of the constitution of the empire in this matter (subsequently sanctioned by the authorities) introduced such an element of doubt and uncertainty into this vital part of industry in an extensive inland country like Germany, has greatly aggravated the evils of the reactionary crisis of 1873-4, and effectually checked enterprise. As to the special causes, he explains that the business year ending on June 30 involves in this last year of falling prices the two last half-years of 1873-4, and that their works have been and are unfinished, and therefore their plans are incomplete. The extraordinary and extravagant rise of values and prices of 1873-4, and the consequent reaction of the autumn of 1873 and this year, were injurious rather than beneficial to such undertakings for steady investment as theirs, except in cases where the whole project and works for carrying it out were completed before the rise in prices.

The rise of prices involved an enormous rise of wages in Prussia, as in England, and such an insufficiency in the number of available workmen, and especially the skilled workmen required for their purposes, that it became a vital necessity to buy land and build barracks and houses on a great scale, so as to accommodate and feed imported workmen, to ensure a natural and moral control in the labour market, and ensure a supply of such workmen for future years on anything approaching to reasonable terms. This was done under all the disadvantages of enormously increased value of land, materials, and workmanship which in some cases amounted to double, in some to nearly three times, the amount they would have cost in 1868-9; but the great object, which the advance of the industry rendered alike necessary to all their neighbours, was obtained (so far as the purchase of land was concerned, on far better terms), and their present position in the labour market greatly strengthened accordingly. Then came the reactionary crisis in the late autumn of 1873, not only in Germany, but in England and Belgium, resulting in the great and unexpected fall of prices, mainly in the iron trade, leaving on our hands in the early part of this year a vast stock of iron of the best qualities at a depreciated value of 65,000l., which at the market price a few months before represented at least 120,000l. If such undertakings as theirs are to be remunerative, where Nature has furnished everything of the best, they must be completed, and rapidly completed too, and just in proportion to both these conditions will be the economy in the cost of construction, the saving in bankers' commission, and interest on borrowed moneys.

As special cases over which he had no control, he might remark that their pits were at first contemplated of certain assumed dimensions and depths; the nature of the strata and other circumstances involved far greater dimensions and depths, so that, for instance, in taking up those of Zollern, as commenced by the former owners, they were obliged to make them 17 ft. in diameter instead of 14 ft., as originally contemplated; and both there and at Hansa they succeeded in overcoming difficulties with the water in sinking, which made bankrupt the previous two companies. In many cases, too, railway junctions to their works were delayed

for three or four years, and one up to the present time being over six years, and they were compelled to make tramways for several miles along the public roads instead. By the more recent purchase of lands and iron mines they have now, with the exception of small portions of land in a few instances for railway junctions, completed their general plan, so far as regards the acquisition of property for the completion of the project as a whole.

With regard to the collieries he remarks that they are situated in what may be termed virgin country, that is, a part of the coal district where no collieries existed, and the coal measures are deeply covered from 350 to 880 ft. with the marl or chalk formation, which latter contains great quantities of water, whilst the coal formation itself, which lies under this, is comparatively free from it. This fact was well known before they purchased Hansa and Zollern, as the companies which possessed these collieries were made bankrupt in their attempts to sink the pits through the water-bearing measures of the marl, whilst the present company by a different system accomplished this feat with one pit in Hansa and one in Zollern. In Erlin, on the other hand, where all the borings were made under their personal direction many years ago, they anticipated no water below 170 ft. from surface, and in fact sank their two pits at the colliery below that point to 1160 ft. without any pumps in the shaft. Under these circumstances they prepared for, and by means of iron tubing, excluded the water from the pits, and though they erected pumping machinery of great power at each colliery, to pump the moderate quantities of water which experience in other parts of the district had shown should be provided for, they did not contemplate that large quantities of water would develop themselves in the coal working far away from the shafts. For instance, after coal work began in Erlin the colliery was worked for two or three years without any pumps in the shaft, and the pumping engine, which had been provided at considerable cost, stood idle at the top of the pit; subsequently they were obliged to put in forcing sets of pumps of 18 in. diameter, to the depth of 1160 ft. to pump water which came into the coal workings at a great distance from the pits, and in the last 12 months the water has so increased that the pumps are scarcely able to deliver the whole quantity, and they are forced in case of accident to abandon the drawing of coal from No. 1 pit, and draw water instead, with water-tubs substituted for the coal cages. In Hansa a great 300-horse power engine and 24 in. forcing sets of pumps, proved in like manner from increase of water in the coal workings insufficient, and they were compelled to put up a second engine and pumps in the same pit. In Zollern at present, having successfully shut out with iron tubing 1600 cubic feet, or 10,800 gallons, of water per minute in the shaft, they were until very lately enabled to do without any pumps, and have now only small underground Tangye special pumps forcing the water in a 6-in. pipe, and are enabled in fact in four hours to pump the accumulated water of 24 hours; but of course they dare not rely on the continuance of this favourable state of affairs there.

Many new collieries are constructing now all around them, and most of them, be it remarked, with only one pit, sometimes meeting and clearly cutting through the same feeders of water which trouble them, and possibly in a series of years the pumping at these numerous collieries will greatly diminish the supply to each; but in the meantime the success or failure of any of the collieries materially and dangerously affects others like their own deriving their supply from the same feeders. The whole success of collieries constructed on such a great scale as these depends upon a very large, secured, and regular output, for the sale of which they have no doubt provision can be made both in markets at home and abroad, provided the supply be regular and can be guaranteed to their customers. By these means sound economy can be attained, and cost of production reduced to the minimum of the time being. They know from 20 years experience in the country that even some small collieries worked by small proprietors under favourable circumstances by adits in the hills and without deep pits, an out of 250 to 300 tons per day rarely does more than cover the cost even in moderate or average times, and certainly not at present, and therefore all their collieries and their arrangements have been designed and steadily carried out for an output of at least 1000 tons per day each, when the two pits are finished, workings opened up, and, in fact, everything complete and almost free from liability to accidents and interruptions. He repeated the conviction which influenced them in proposing and the principle upon which this company was in fact established—that the combination of well situated iron-works for the production of raw iron, with the possession of large collieries and iron mines to furnish the necessary raw materials, constitutes one of the soundest bases for investment, and the permanent return of a fair profit.

AMERICAN IRON AND STEEL INDUSTRIES.

The series of commercial reports by Her Majesty's Secretaries of Embassy and Legation have recently received a valuable addition in the shape of a paper by Mr. J. P. Harris-Gastrell on "The Iron and Steel Industries of the United States." The recent depression in that branch of American industry, notwithstanding the care with which it has been protected by absurd tariffs, gives special interest to this report at the present moment. Mr. Harris-Gastrell first deals with the primary materials of these manufactures.

It is not 30 years since the first iron ore was taken from the Jackson Mine at Negaunee, and now it is from the Lake Superior ores that one-fifth of American iron is made. The first sample was declared valueless, yet the result of its working has been to fill what was then a wilderness with 20,000 people. In 1873 the Lake Superior region yielded 1,278,879 tons of ore, whilst the Missouri region is estimated to have produced 750,000, and the Lake Champlain region 475,000. It is impossible even to estimate the quantity yielded by the other regions. The Michigan iron mines are, according to a statement which is regarded as approximately correct, worked by 4032 men, whose wages for one month amount to \$273,700. The total disbursements for the same period are given as \$374,633. In 1873 the production was reckoned at 1,197,000 tons of ore, worth at the mine \$8,012,250. It is seldom that the mines are worked more than eight months of the year. The cost of production at Marquette, the shipping port of Lake Superior, was said to vary from \$2 50c. to \$6 per ton. The Cleveland market governs the price of Lake Superior ores. The contract prices there were:—

Red specular ores, 64 to 66, Jackson, 88-50 ... 88-25 ... 89-50 ... 113-50	1868-9.	1870.	1871.	1872.	1873.
ditto, others ... 8-00 ... 8-50 ... 8-00 ... 9-00 ... 12-00					
Magnetic ores, 63 to 65, ... 8-00 ... 8-50 ... 8-00 ... 9-00 ... 11 to 12-50					
Hematites, 50 to 55 ... 7-50 to 8-00 ... 7-50 to 8-00 ... 9-00 ... 11 to 12-50					

After the panic the prices of the first-class fell to \$10, and a further reduction for the present year. In 1872 Pittsburgh used only 4010 tons of local ores, whilst it received 81,630 tons, one-half of its consumption, from Lake Superior. It is expected, however, that more attention will be paid to the native ores of Western Pennsylvania and the Virginias. In the Missouri region the Iron Mountain district (in which may be included the Pilot Knob Mountain) is the most important. In 1870, 316,000 tons were mined; next year the quantity fell to 250,000, but in 1872 it had risen to 448,000. The increase last year is believed to be still greater. As more mines are opened out the price of Missouri ores will be reduced. Lake Champlain region extends over the Eastern and Middle States. Its most valuable portions have always been in a few hands, and large fortunes have been made. Wages were higher, but without any corresponding advantages to the labourers, who were chiefly foreigners, and improvident. A library costing 1s. a month had been given up, and a condition that the children should be sent to the free school had been abandoned. In 1860 the standard wage was 87½ cents; in 1873 it had risen to \$2 25c. The men are believed to be saving less now than they did on the lower wage. Formerly nearly all the puddling-furnaces used Champlain ores for fixing, but now those of Lake Superior are ground into paste, and are said to make good wall-fettling. The region of southern ore extends over the States of Kentucky and Tennessee, and the adjoining States of Alabama and Georgia, on the west of the Blue Ridge, and the States of Virginia and North Carolina on the east. Alabama is reported to possess a ridge of red fossiliferous ore 100 miles long and a little less than 15 ft. thick. The Georgian ores are good for Bessemer steel. Virginia possesses brown hematites in various parts, and in the James river valley there are rich and extensive beds of magnetic and red and brown hematite ores. North Carolina's great resources in iron ores are as yet practically undeveloped. Large quantities of brown hematites are found in Kentucky, and Tennessee possesses some good steel ore and fossil ores in plenty. A block of coal from Roane county received a prize at the Vienna Exhibition; it weighed 3500 lbs. The cost of production ranges from \$1 50c. to \$2 75c.—the trade is increasing. The Pennsylvania region, which includes New Jersey, Delaware, Maryland, Western Virginia, together with the famous Hanging Rock district, is essentially a region of scattered local ores. At Franklin, in New Jersey, is the noted Franklinite ore, from which spiegeleisen is made. The cost of production varies from \$1 60c. to \$2 10c. A million tons are yearly mined in this region.

At the end of 1873 there were 636 furnaces, whilst 122 more were in contemplation. This statement shows 265 charcoal, 201 anthracite, 162 bituminous coal and coke, and seven mixed furnaces, of which only one used peat as fuel. Another estimate makes them 712, and reckons the production at 2,662,534 tons. In January this year returns from 335 were received, showing that 12,522 hands were unemployed. The financial panic seriously affected the iron trade. Whilst the margin of profit was large many of the ironmasters were content with antiquated structures, but these are giving way to new ones of improved construction. The cost varies very greatly. It is usual to consider it as averaging \$10 per ton of pig made in a year. Mr. Harris-Gastrell supplies many details which will be interesting to the English expert anxious to compare our methods with those of America. At the present time the owners of furnaces are seeking, individually or in companies, to possess their own ores. The richness of many of the American ores helps

to counterbalance the dearness of labour. The best ores are at a distance from the iron-producing regions. In Pennsylvania pig-iron ores appear to be plentiful, with the exception of Bessemer pig. There is a scarcity of steel ores, the cost of transport more than quadrupling the price of those from Lake Superior and Missouri, the chief source of supply. The cost per ton of anthracite pig-iron is reckoned at 4½, 12s. 9d.; of coke pig-iron, 5½, 5s. (in south, 3½, 14s. 9d.); block coal pig-iron, 4½, 16s. 9d. (in south, 3½, 13s. 9d.); charcoal pig-iron, 6½, 11s. (in south, 4½, 9s.). The estimated annual capacity of all the furnaces in the United States is 4,371,277 tons. A statement is given showing that of a make of 475,002 tons 57,566 tons were cold-blast and 417,636 tons were hot-blast charcoal pig-iron. Castings from American pig are generally admitted to be superior to similar castings from English pig.

The total yearly capacity of the Bessemer works at the end of 1874 will be 222,000 net tons. Six heats were the maximum in England three or four years ago, whilst from 18 to 24 heats are the standard practice in America. The improved plant leads to much larger production. In one instance 48 blows were successfully attained in 24 hours, with two cupolas only, the amount of steel produced being about 270 tons. In this case 14 blows would have been a fair day's work. In 1868, 8500 tons were made; in 1873, 140,000 tons.

The history of the iron and steel industries of the United States shows a rapid development. In 1810 there were 153 furnaces; the annual product of pig-iron was 53,908 tons; there were 364 bloomeries, forges, and rolling-mills; the annual product of wrought-iron was 24,541 tons. In 1872 the annual product of pig-iron was 2,250,000 tons, of a value of \$90,000,000; there were 400 bloomeries, forges, and rolling-mills, the annual product of wrought-iron was 1,602,000 tons, and its value \$175,000,000. The group of iron and steel industries in the United States represented in the last census a value of nearly \$102,000,000. The hands employed were 338,213, whose annual wages averaged 53½. The aggregate production was valued at 68,160,000. A rail mill with a capacity of 60 tons per 24 hours would cost \$20,620 to construct. Bessemer works and mills with all modern improvements, and with a capacity of 150 tons of rails per day, would have cost from \$93,750 to \$112,500. In 1873 the cost of making iron rails was about \$70 per ton, but is now less than \$60. Bessemer steel rails cost about 13½, in place of 15½. The cost of producing finished iron is given in the census as 14½, 8s. 4d.; now it would probably be 12½, 18s. 9d.

The cost of production, Mr. Harris-Gastrell thinks, is as low as it is likely to be under the present economic and industrial conditions. As regards materials there seems little chance of any cheaper cost of anthracite, but the cost of producing coke or block coal may be lessened. Wages have fallen from 15 to 20 per cent., and, with the present cost of living, can hardly bear further reductions. Transport is generally thought to be too high. Labour-saving contrivances are eagerly sought for.

The question of the tariff is one that is greatly debated in America, and the copious extracts which Mr. Harris-Gastrell has given from protectionist writers give a facetious colour to some of his pages. America has disadvantages as compared with an older and more compact country like England. The higher price of labour, the higher rates of interest, the smaller accumulation of capital, the lesser period of manufacturing activity are those her names; against these place the great advantage that "there are no honours due to upset the honest inventor." England uses to-day, in many of her manufactures, tools and machinery inferior to American inventions which meet similar requirements "is a boast often made on the other side of the Atlantic, and not altogether without reason. The Eastern States have the disadvantage of being far off the coasts; but Connecticut has taken the lead in the best hardware, and Boston makes the best locomotive plates. Except in Ohio, the Western States make as yet only a small quantity of merchant iron. St. Louis is by some regarded as a probable rival of Pittsburgh as an iron centre. Opinions vary as to the capabilities of the South, in spite of its known richness in ores.

English rails are still imported. The Americans think that if their labour were only a little cheaper they could compete with us in pig-iron, but not in bar-iron. America will soon have complete possession of her own markets. The value of her iron and steel exports was, in 1871, \$19,005,090; in 1872, \$8,747,106; in 1873, \$11,119,831. The excess in the first year is due to the large trade in rifles, &c., during the Franco-Prussian war. In 1872 railroad bars were exported to Canada, Cuba, Brazil, Mexico, Columbia, Venezuela, and England, which took \$150 of the \$92,980 at which they were valued. In the production of a superior charcoal iron Lake Superior probably offers the greatest possibility, the chief difficulty being that of fuel. Experiments have been made with peat, but the problem can scarcely be regarded as solved. The railways built and to be built will, no doubt, increase the facilities for charcoal, and the Canadian schemes for developing their canals will lessen the freight to Montreal by probably about one-half of last year's rates. It ought then to be possible to export charcoal pig-iron even to England. There is reason to foresee that Pennsylvania, on the east of the Alleghenies, may look to foreign markets for her customers.

As a rule, workmen who are excellent only in some specific branch of industry do not succeed so well as those who are handy men, able to do a little of everything mechanical.

IRON ORE REGIONS OF THE UNITED STATES—No. III.

The ores of ILLINOIS are confined so far as known to the coal measures, and are generally contaminated with sulphur to an unwelcome extent. Formerly some lower coal measure ores of the honeycomb and pipe varieties were worked, but run out. These yielded about 56 per cent. of iron. The iron ores of INDIANA are few, and generally poor in quality, and while Nature seems to have denied this State the deposit of mineral so general in others the State is yet a very successful iron-making locality. This is owing to the abundance of superior block coal, the only fuel except the splint coals of Virginia and anthracite capable of making iron without coking. To this coal the State of Indiana owes without question its rapid and continuous progress in manufactures. In Jasper county bog ores are abundant, covering an area in the aggregate of 6000 acres. These beds are generally 1½ ft. below the surface, and but a few inches thick, increasing in some localities to 2 ft. The same ore is found in Starke county, and has been mined to some extent. This ore is a remarkably pure bog ore, and for admixture with Lake Superior ore is very desirable should cheap freights permit its utilisation. In Carroll county are large beds of bog ore, which were formerly worked at Logansport in a forge, being transported a long distance by wagons. In Raccoon Valley, Parke county, kidney ore is said to be abundant, as also in many localities in Jackson township. The people of the State are especially energetic and enterprising, and have made their advantages in coal widely known, thus attracting a very considerable capital to them, and building up a highly prosperous manufacturing community in a purely agricultural region.

The iron ores of KENTUCKY comprise brown hematites and kidney and block ores, carbonates principally. In Western Kentucky they have been worked for years with charcoal, and in Eastern Kentucky and along the Ohio river with coal from the Eastern Kentucky coal fields. The iron region of Western Kentucky is a northern extension of the Tennessee brown hematites, and is between the Cumberland and Tennessee rivers. Here are numerous furnaces and many old forges. The ores found in this region range from 25 per cent. to 50 per cent. iron, generally rather low in chemical impurities, and with a considerable quantity of silicious matter. According to Dr. Owen blackband ores are found in the upper coal measures of Muhlenberg county. Although one of the greatest iron-making States in the Union, OHIO depends rather upon Michigan and the Lake Superior region for the great bulk of her ore supply. The native ores of Ohio are confined to the carbonates of the upper and lower coal measures. The largest known supply of true blackband ore in the country is found and extensively worked in Tuscarawas county, while the kidney and block ores are extremely abundant in the Hanging Rock region of Southern Ohio, on and adjacent to the Ohio river. Before the development and shipment of the Lake Champlain and Lake

Superior ores the industry in this State was precarious and uncertain. Since the introduction of these ores, however, the abundant and superior coals have firmly established and developed one of the most thriving and profitable iron industries of the country. Not only is the State a very large producer of pig and rolled iron, but was the first in the country to introduce the Bessemer steel process west of the Alleghenies, and is, moreover, second to none in the production of agricultural and miscellaneous machinery. In North-eastern Ohio the furnaces mix the Lake ores with the nodular and blackband ores of the coal measures. Near Youngstown, on the Mahoning river, most of the numerous furnaces pursue this course. In this locality the blackband and kidney ores, everywhere abundant, are used about one-fourth each with the best Lake Superior ore. In Southern Ohio are very many furnaces running almost entirely on the native ores, which are varying in character, but all of the same geological formation. The ores of Ohio, therefore, while they do not present the commercial interest of some other States, are extremely valuable as admixtures, and in the case of true blackband ores will be extensively developed in the future.

In MAINE there are deposits of the primary ores, principally red hematite, of which the most extensive deposit is found in the Aroostook river, 50 miles above its mouth. This ore contained considerable manganese, and was found in the metamorphic slates. The iron industry in MARYLAND has been carried on since a very early day, indeed, long before the Revolution, and some of the same furnaces, or some of their successors at the same localities, are still engaged in the business. The ores are not as extensively found as in some other States, but are of good quality, and easily worked. The principal magnetic ores mentioned are the Tyson and Carroll Mines, near Sykesville, while at the Point of Rocks in the Blue Ridge, on the Potomac, 12 miles west of Frederick, are enormous masses of fine limonite, a hydrous oxide of iron in soft slates. At Frederick are splendid beds of brown hematite, and at the old Catocin furnaces in Frederick county are beds of an argillaceous oxide of iron, with a considerable percentage of carbonate of zinc. On the Monocacy Creek, and near Sharpsburg, at the old Antietam furnaces, one of the earliest ironmaking sites in the county, are also argillaceous oxides and brown hematites. In Carroll county are argillaceous oxides, and near Westminster are mangiferous ores. Fossil ores are found at Cumberland, and are the supply of the furnaces there. In Allegheny county it was supposed formerly that very extensive deposits of ore existed, and close examination was made at the instance of the George's Creek Coal and Iron Company. These ores were the carbonates of the coal measures interstratified with fire-clay and shales, and representing a workable thickness of some 7 ft. in a depth of 55 ft. Bog ores exist also to some extent in the tide water counties of the Peninsula, and have been and are worked on the affluents of the Chesapeake Bay.

The primary ores of MASSACHUSETTS are not numerous, but both magnetic oxides and micaceous specular ores are found in Franklin county. These occur in beds 2 ft. thick, and almost adjoining each other, a curious geological formation not easily explained. The hematites occur in the north-western portion of Massachusetts, and are the same ores which adjoin in Vermont on the one side, and in Connecticut on the other, extending thence into Eastern New York. These ores are all, as in Vermont, more or less mangiferous; they have been worked from a very early date, in some cases prior to the Revolution, and charcoal furnaces are still conducted at Lanesborough, Richmond, and Cheshire, with one, the only anthracite furnace in Massachusetts, at West Stockbridge. These ores have been very abundant, and although the furnace industry has never been very greatly extended the regions named have always produced iron. NEW HAMPSHIRE was formerly the site of a considerable charcoal-iron industry, of late years almost entirely abandoned. The magnetic ores were of considerable importance and good quality, and were found in various localities, principally in the White Mountains. In the town of Winchester a massive steel grey ore, in beds from 5 to 40 ft. thick, was worked in 1795 at Furnace Village. On Thorn Mountain, in Jackson, at Piermont, are specular ores. Baldface Mountain, in the town of Bartlett, a mile from the Saco river, and 1400 ft. above it, contains large veins of magnetic ore (peroxide, protoxide, and manganese), found in granite and greenstone. This is said to be the largest deposit of magnetites in New Hampshire. Near the village of Franconia, in the Franconia Notch of the White Mountains, the New Hampshire Iron Company worked a vein of magnetic ore found in granite walls. This ore was worked in the Franconia furnace in the village, and the product cast into stove-plates. Steel was also made here from this ore to some extent previous to 1800. The vein first worked was wide, being some 6 feet, but at a depth of nearly 150 ft., pinched to a width of 1 ft. The old excavation has caved in, but at the last blast previous to 1860 an adit was run in the side of the mountain to reach the vein. The writer obtained here in the summer of 1872 a piece of an old pig which had been made in the first furnace, carried away by a flood many years ago; this pig had been unearthed from the bed of a creek, formerly the site of the old furnace, by a similar flood to that which buried it, and by the statements of reliable inhabitants of the village had been buried over 40 years. It was broken with great difficulty on an anvil, and showed many peculiar features of malleability, the iron drawing cold almost like wrought-iron before fracturing, and the fracture presenting rather the appearance of steel than iron.

To thoroughly describe the immense masses of iron ore found in what is known as the LAKE SUPERIOR REGION OF MICHIGAN would be tedious, but the geological and chemical formations of the region have been the subject of numerous scientific treatises. The first Lake Superior ore submitted to a thorough test in a blast-furnace, in competition with the hematites of Pennsylvania, was run through the old Sharpsville, Pa., furnace in 1854. Previous to this time iron from the ores of the Jackson Mine had been made at the Carp forge, near Negaunee, and afterwards at the Marquette forge; and some inferior experiments were made with the ore in some other localities, but not upon a scale which could give character to the ore or to the region in which it was mined. The first real furnace tests, however, were those made by Mr. David Agnew in 1854. In 1856 the Clay furnace was reconstructed by the Sharon Iron Company, and this is in all probability the initial point of furnace work with Lake Superior iron ore so far as furnishing the general market with pig-iron is concerned. In 1873 the iron ore shipments were 1,066,875 tons, and the pig-iron shipments were 35,245 tons. The rock formation of the Lake Superior iron region is of the oldest geological age, being made up of the Laurentian and Huronian systems, which contain no remains of animal life, and are hence termed azoic. The Laurentian system is here represented by the granite beds, whilst the Huronian, in which the ore beds occur, is made up of strata differing in composition. The ore beds occur between the quartz and diorite, the former constituting the hanging and the latter the foot-wall of the seam. The diorite is composed of feldspar and hornblende. Thin layers of chloritic and talcose schists often intervene between the ore and its walls, or lie in the centre of the seam itself. According to the opinion of those geologists who have recently examined the formation with great care, the ore was originally dissolved out from the pre-existing strata by chemical agency, and deposited by precipitation in horizontal beds, which were afterwards exposed to great heat and pressure, resulting from the great upheaval and disturbance which characterised the azoic age, by which the strata were upturned, pressed into folds, and displaced in a similar manner to the formation along the line of the Allegheny mountains. By subsequent erosion the tops of these folds were removed, giving to the ore beds the general appearance of fissure veins, although, upon careful investigation none of the phenomena accompanying veins of this class can be discovered.

IMPROVED ROCK-DRILL.—By the invention of Mr. W. HOAR, of Floyd, Iowa, the main portion of the drill is attached to the shank by means of a socket and screw. A section has a long mortise and a wing on each side, secured by a tenon, which extends half-way through the mortise, and fills it in length and width. Through each of the wings are two mortises, which receive each a gib and key. The outer ends of these mortises are made angular, and the gibs are made to fit, so that they cannot work longitudinally when the keys are driven, while angular portions serve to hold the two wings together. The wings as well as the main part have each a cutting edge with right-angled lips.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Dec. 22: In No. 2 adit level, driving east, the lode is getting more settled in the past week, and still producing a little lead. No. 4 adit, over this level, has improved in the last week, and is now worth 1½ per fathom for lead. We are making good progress in clearing the lode's shaft, and have cut a roadway in it, also in clearing No. 1 adit level east.

BAFFYLLDE.—J. Juleff, Dec. 22: The lode is looking well, and producing good copper ore. The 90, west of No. 4, is worth 8½ per fathom. In the 102, west of No. 4, the lode is influenced by the splice, and from its present appearance we think it will quickly improve. I expect in a few days we shall be able to resume driving the 112, west of No. 4. The men in clearing the adit west to No. 4 are making good progress. We will send you our setting report on Monday next.

H. T. Haley, Dec. 22: Stowford Mine: There is no change in the level driving east of No. 8 since our last. The lode in the bottom of the level, west of No. 2, is improved, worth from 15 to 20 tons per fathom. The lode east of No. 1 is also improved since last report, worth now 15 tons per fathom. We have not reached the lode in the cross-cut, east of No. 4, yet.

BEDFORD UNITED.—W. Phillips, Dec. 23: We shall continue our drives by the side of the lode for another week or so, consequently there will be no change to notice until the lode in the different levels are taken down.

BOG.—W. T. Harris, J. Barkell, Dec. 22: The branch of ore in the bottom level, the 175, on the Whitestone lode, is extending westward, and is of the same value per fathom as reported last week. We are making fair progress in the 183, going west on the same lode, but are not yet through the twitch of poor ground. We are satisfied there is a good run of ore ground before us, and no time shall be lost in reaching it. We have also cleared this level west on the main lode, and shall at once begin to drive it forward. The ground is very promising, and we believe there is not far to drive before discovering something good. The tribute pitches throughout the mine are yielding lead and blende in usual quantities. The weather continues severe, and very little can be done towards dressing, &c.

BOWDEN HILL.—J. Goldsworthy, Dec. 22: The adit level is extended 70 fms. 1 ft. 5 in. The ground is changing its colour, and becoming larger in its clearance; this we regard as a favourable token of nearing a change which we trust will prove to be a beneficial one. The price for driving is 6½ per fathom, and progress good considering the nature of the ground. The air shaft has been sunk from surface to the adit for the purpose of ventilation, if this had not been done, air pipes would have had to be put down ere this; this shaft will ventilate the end for some months to come, when the air again goes poor. Air pipes will have to be placed from the shaft to the end, the shaft will act as a chimney; by this means the adit can be driven to the main lode.

CAEYON.—T. Hodge, Dec. 22: The 70, north of cross-cut, is driven 15 ft.; the last 3 ft. is in country rock, proving the lode to be 2 fms. wide; it is dispersed and poor for mineral. The men are now placed to drive east on the course of the lode, where from the appearance of the end I hope to have some improvement soon. The winze in the bottom of the 70 east, 15 fms. east of cross-cut, is worth 15 cwt. of lead ore per fathom—a nice lode. The lode in the bottom of the 50 is worth 10 cwt. of lead ore per fathom; the ore ground here is short, but lengthens as we go down. Dressing is at a standstill, owing to the frost, but we are keeping our pumping-wheel going with difficulty. Up to now we have no hindrance to the lode.

CALDWELL.—J. Poljanec, Dec. 17: The 20 east end is worth for copper 10½ per fm. The lead course is only partly cut through on the south wall; so far as seen it is worth 20½ per fathom. Since my last we have sunk a winze through from the 10 to the 20, which has opened a good piece of ground. As soon as possible we purpose sinking below the 20, and in order to do this effectively a plunger-lift should be fixed in the junction shaft. We have also holed the winze from the 10 to the 20, on the north part of the lode, and we have now two stops at this point producing both copper and lead, worth about 1½ per fathom. The lode in the bottom of the 10 east is improved, and worth about 20½ per fathom for lead and copper. The lode in the bottom of the 10, west of junction shaft, continues poor. In cross-cutting the lode in the 90 west no improvement has taken place. The Nos. 1, 2, and 3 stops, in back of the 80, are worth on an average 15½ per fathom. We are looking better than at any former period during my management of the mine, and by prosecuting the chief point recommended by me at starting, I have every confidence in opening a good mine. The new engine is doing its work admirably, and without it we should be at a standstill. We shall shortly get it fully employed in winding stuff; and at any time, should the wet and snow stop the water-wheel, we are fully prepared to pump the water with the steam engine. The severe frost and heavy falls of snow prevent us from dressing lead. We are, therefore, preparing a parcel of copper ore for the market by the end of the year. If the weather should moderate we can easily get a parcel of lead ore ready at the same time.

COURT GRANGE.—E. Dunkin, Dec. 22: The underground department in the western part of the mine continues as reported on the 17th inst. Both stops in the adit are opening out good paying ground. The tramway is completed in the 18 east, and the tramming resumed. Owing to the frosty weather, and so much snow drawing is at a standstill until a change in the weather takes place. The men in New Brogan have begun driving east on the course of the lode, but I am afraid they will soon be driven by the water, unless a thaw comes soon, to enable the pumping wheel in that part of the set to work more continuously. Fortunately the wheel working the main engine is in a more sheltered position, and consequently has not yet been idle on account of the frost. The water in the old mine is down 20 ft. under the 40, and is being got out faster than before. Sunday night last we had a breakage of several pipes connecting the rods at surface, but which in a few hours again. Everything is now going on first-rate.

CRENVER AND WIRAL ABRAHAM UNITED.—William Thomas, James Hamill, Dec. 23: Sturt's Engine-Shaft: In the 228, driving west, the lode is 2 ft. wide, yielding good stones of copper ore; the lode itself has a better appearance. In driving east of the 228, and west of shaft, the lode is 2 ft. wide, yielding 1 ton of copper ore per fathom; we find by the bearing of this lode that it is standing to the south of the shaft. We have suspended the 120 cross-cut for the present, and put the men to drive a cross-cut in the 121 level opposite the shaft, which will cut the lode in about 2 fathoms further driving in the winze sinking below the 215 the lode is 2½ ft. wide, yielding 2 tons of copper ore per fm. In the 215 end, driving west, the lode is 2 ft. wide, producing 1½ ton of copper ore per fathom. In the rise in the back of this level, against St. George's shaft, the lode is 3 ft. wide, yielding copper ore to dress; we hope to make a communication here during this month.—St. George's Shaft: In the 203, driving east on the south lode, west of shaft, the lode is 2 ft. wide, producing 1½ ton of copper ore per fm.; the lode in the east has very much improved.—Woolf's Shaft: In sinking this shaft below the 208 the lode is 2½ ft. wide, yielding 1 ton of copper ore per fathom; this shaft will be down the required depth by the end of the present month.—Felly Shaft: In the 248, driving west, the lode is 2 ft. wide, producing good stones of copper ore and a little tin. In the 248 end, east of winze and west of shaft, the lode is 6 feet wide, and will yield 1½ ton of copper ore per fathom.—Richards's Shaft: In the 220, driving west, the lode is 3 ft. wide, producing good stones of copper ore, and having a very kindly appearance. In the winze sinking below the 208, west of shaft, the lode is 4 ft. wide, yielding 1 ton of copper ore per fathom. In the 208, driving west, the lode is 3 ft. wide, producing 3 tons of copper ore per fm.; this end is looking exceedingly well. There are employed this week on outwork 187 men and boys; on tribute, 95; at surface, 56; total, 318 men and boys.

DE BROKE.—T. Hodge and Son, Dec. 22: We got our pumping-wheels to work again on Saturday last, and by this morning the mine was drained to the bottom, and everyone in his place at work. It is freezing hard now, but we shall use every effort to keep the wheels going. Our bargains are fully manned, and at present everything below ground is in full swing, but nothing can be done in the dressing department until a thaw takes place.

DEER PARK.—John Goldsworthy, John Bucknell, Dec. 19: The ground in the cross-cut driving south from the engine-shaft is showing a strong mixture of capel; there is a large increase of water, which leads us to be of opinion that the cross-cut is nearing a change; we trust it will be a favourable one. The engine and machinery, both at surface and underground, are in good order, and work well.

DENBIGHSHIRE CONSOLIDATED.—John Pryor, Dec. 22: The 112 east is looking more promising than I have seen it for some time. The nature of the ground through which we are passing is favourable, proving that my idea of our future prospects here will be quite borne out by fact. The lode is composed of spar, shale, and lead ore, producing of the latter about 1 ton per fathom. In the 112 west we have a decided improvement coming in. In the bottom of the level the lode is producing lumps of lead of good quality. I believe that as we extend west to meet the measures that this joint will open out, and much increase in the production of lead. I have seen on former occasions promising ground at this end, but nothing equal to the present. In the 66 west we have very promising ground, containing the lumps of ore, with an increase of great improvement shortly, worth at present ½ ton of lead per fathom. The tribute bargain below this level is worth about 1 ton of lead per fathom.—Dressing Floor: The lead sold has been delivered, and we will make as much haste as we can in preparing another parcel.

DEVON GREAT CONSOLS.—James Richards, Dec. 24: Railway Shaft, New South Lode: In the 160 east 5 ft. of the lode is still being carried, which is composed of strong capel, mundle, and quartz, with good stones of ore. In Killo's winze, below the 165 west, the lode is being stripped down, and worth 3 tons of ore, or 12½ per fathom.—New Shaft, New South Lode: In the 145 east 5 ft. of the lode is still being carried, which is composed of increased quantities of arsenical mundle, with capel, quartz, and ore worth 12 tons, or 50½ per fathom. In the 145 east, on the north part of the lode, 5 ft. of which is still being carried, is worth 4 tons of ore, or 24½ per fathom. In the 100, east of Alford's cross-cut, on Northway's lode, the lode is 2½ ft. wide, producing good stones of ore.

DYLLIFFE.—E. Evans, Dec. 23: Dylliff Lode: In the 120 we have cross-cut about 30 fms., and expect to cut the lode in about a fortnight. The 40, east of Boundary shaft, has been continued by the side of the lode, so there is no change to notice. The lode when last taken down was worth 15½ per fathom. In the 15, east of old engine-shaft, no lode has been taken down since it was last reported on, but from the appearance of the part taken down, I expect it will further improve as we go eastwards. At the end of this month we intend to resume driving of the 25, east of old engine-shaft, in order to get under the ore ground newly discovered in the 15, at which point, by all appearances, we shall find the lode much richer than in the 15. Winzes must be sunk from the adit level to the 15, and also from the 15 to the 25, to ventilate this part of the mine, as well as to open out large sections of stopping ground on this fine course of ore as early as possible. No change worthy of notice in any other part of the mine. Nothing has been done in drawing and dressing this week, in consequence of the machinery and wheels being frozen up.

EAST WIRAL GRENVILLE.—E. Hosking, W. Bennetts, Dec. 19: There is nothing new to report since our last.

FROX VELLAS.—Capt. Harper, Dec. 23: The stop in the roof of the level, west of deep adit, continues much the same as for some time past, and is worth about 12 cwt. per fathom for lead ore; the men are making good progress in stopping, and judging from the appearance of the ground and lode we believe that this run of lead will go through to the level above. In consequence of so much frost and snow for the past week we have done very little with the dressing, and at present I have stopped it altogether until there is a change. I have put two of the dressers inside to stop, so at present there are eight men stopping until the weather changes, which I think will not be long, after which we shall go on with the dressing again with all speed.

GORSBDD AND CELYN LEVEL.—William Edwards, Dec. 22: There is no change to notice since my last report, but the discovery on the Gorsedd lode continues quite as good, and I think we may venture to say we shall have 10 or 12 tons for the next sale, which will be a favourable commencement for the new year.

GREEN HURTH.—William Vipond, Dec. 15: The end south from incline is set to four men to drive, 9 ft. high by 6 ft. wide, at 166s. per fathom; this is yielding

at present 4 tons per fathom in length on the vein the size we are taking it, besides leaving strong brangled ore on the east side. The stop and side above, and behind this is set to four men, at 59s. per fathom of 144 square feet; we are taking this about 9 ft. wide at present, and it will yield 6 tons of ore per fathom—1 fm. in length—the width we are working leaving good ore on both sides. The west side further back is set to two men, at 47s. 6d. per fathom, and will yield 4 tons of ore per fathom. The west side above adit is set to two men, at 58s. 6d. per fathom. From top of rise in low level is set to two men, to check off or mouth, at 62s. 6d. per fathom.

Dec. 17: There is no change of any importance in any part of the mine this week. The ore-producing workings are all yielding about as reported in settings.

HINGTON DOWN CONSOLS.—J. Richards, Dec. 23: Bailey's Shaft: In the 150 west the lode is from 4 to 5 ft. wide, consisting of quartz, peach, mundle, and capel, with a little of both copper and tin ores. In the 150 west, east of Cooking's winze, the lode still looks well, and is worth fully 20½ per fathom. The lode in three stops in the back of the 140 west is of the same value, worth, on an average, 25½ per fathom. In the 120 west the lode is 3 ft. wide, and produces a little copper ore. In the stop in the bottom of the 120, in Fitz's winze, the lode is worth 15½ per fathom. The lode in the stop in the bottom of the 120 west, on the north part of the lode, is worth 15½ per fathom. In the 110 west the leading part of the lode is still 2 ft. wide, and worth 15½ per fathom. In Brewer's winze, sinking below the 110 west, the lode is worth 6½ per fathom.

LADYWELL.—Arthur Waters, Dec. 24 (Telegram): In the adit level south the counter lode is looking well. There is no change in any other part of the mine. Will report more in detail next week.

MARK VALLEY.—Jas. Seacombe, Jas. Stenlake, F. Renals, Dec. 18: Setting Report: The 141 to drive east on new lode, by nine men, at 20½ per fathom; lode worth 2 ft. wide, containing mundle and stones of copper ore. We purpose continuing this drive 2 fms. more, for further proof of the lode eastwards. The 136 to drive west, by four men, at 18½ per fathom. The part of the lode in the end is chiefly peach and capel, containing mundle and stones of copper ore. We have altered the course of the level to south-west to reach the spar part of the lode. To stop Marke's lode, east of winze, in back of 124, by two men, at 4½ per fathom, worth 3 tons per fathom. To stop Marke's lode, west of winze, in back of 124, by two men, at 3½ per fathom, worth 2½ tons per fathom. To stop Marke's lode, in bottom of 109, by four men, at 5½ per fathom, worth 3½ tons per fm.

Dec. 17: The lode in the stop in the bottom of the 109, by four men, at 5½ per fathom, worth 3½ tons per fm. No. 1 stop, on Rosedown lode, in bottom of 80, by four men, at 6½ per fathom, worth 5 tons. To stop south part of Rosedown lode, in back of 80, by four men, at 5½ per fathom, worth 4 tons. To drive the 70 west, on Rosedown lode, by two men, at 9½ per fathom; lode improved, now worth 2 tons of copper ores per fathom. To drive the 60 west, on Rosedown lode, by two men, at 7½ per fathom; lode composed of capel, quartz, and gossan, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 60, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 50, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 40, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 30, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 20, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 10, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom. To stop Rosedown lode, in back of 0, by four men, at 5½ per fathom, worth 1 ton of copper ore per fathom.

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Copper Ores for sale—Carn Brea 176—Crenver and
parcels—West Wheel Tolgus 237—East Pool 184—Carn Brea 176—Crenver and
Wheel Abraham 150—New Pembroke 115—West Wheel Seton 113—East Bassett 82
—South Wheel Croft 80—Cathedral 30—South Carn Brea 27—New Dolcoath 10—
South Tolgarn 5—Total 1212 tons.

people. The mica was evidently mined in western North Carolina where even long-abandoned workings have lately been re-opened, and made the scene of a very

[illegible]

* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence:—The Nascent Copper Process—Air as Fuel—What is Electricity (R. J. Crickmer)—Cape Copper Mining Company—Mining in Wales, Parish of Llanarmon—Disposal of Mine Agents—The Last Retrospective View of Mining generally in 1874 (Abrahamson)—Legitimate Mining—Cape Copper Mining Company—Foreign Mining and Metallurgy: Australian Mines; Official Report on Explosive Substances—No. II.; Manufacture of White Lead, Copper Pyrites, Patent Matters, &c.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, DEC. 24, 1874.

COPPER.				IRON.			
Best selected...	per ton	£	s. d.	Best selected...	per ton	£	s. d.
Tough cake and tile...	93	0	0	Bars Welsh, in London	8 17	6	9
Sheeting & sheets...	93	0	0	Do., to arrive	8 17	6	9
Boils	101	0	0	Nail rods	9 10	0	0
Bottoms	100	0	0	,, Staffs, in London	10 15	0	0
Old	87	0	0	Bars ,, ditto	11 0	0	12
Australian, Wallaroo	95	10	0	Hoops ,, ditto	12 0	0	0
ditto other brands	93	10	0	,, at works	11 0	0	11
Chili bars, g.o.b.	83	10	0	Hoops, ditto	11 0	0	15
Wire	0	1	1	Hoops, single, & plate 12	10 12	0	15
Tubes	0	1	2	Pig No. 1, in Wales	5 0	0	6
				Refined metal, ditto	7 0	0	8
				Bars, common, ditto	8 0	0	8
BRASS.				STEEL.			
Sheet...	per lb.	£	s. d.	Do., merchant, f.o.b.	per ton	£	s. d.
Wire	9 1/2	10	0	Do., in Tyno or Clyde	7 0	0	7
Tubes	9 1/2	10	0	Do., Swedish, in Wales	7 0	0	7
	12 1/2	12	0	Do., Swed. in London	16 0	0	17
Yellow metal sheathing	8 1/2	9	0	To arrive	17 5	0	0
Sheet	8 1/2	8 1/2	0	Pig No. 1, in Clyde	4 7	0	5
SPELTER.				IRON.			
Foreign on the spot...	per ton	£	s. d.	Do., f.o.b. Tyno or Tees <th>4</th> <th>0</th> <th>4</th>	4	0	4
to arrive	23 15	0	24	Do., Nos. 3, 4, f.o.b., do.	3 10	0	4
	23 15	0	23	Railway spikes	12 10	0	14
ZINC.				Indian Charcoal Pigs,			
In sheets	per ton	£	s. d.	in London, p. ton	8 0	0	10
	30 10	0	31		0	0	10
TIN.				STEEL.			
English blocks	per ton	£	s. d.	Swed., in kegs (rolled)	per ton	£	s. d.
Do., bars (in brls.)	99	0	0	Ditto (hammered)	19 0	0	20
Do., refined	101	0	0	Ditto, in fagots	20 10	0	0
Barren	100	0	0	English, spring	19 0	0	24
Straits	94	0	0	LEAD.			
Australian	93	0	0		per ton	£	s. d.
TIN-PLATE.*				English Pig, com	24	0	0
IO Charcoal, 1st qua. & 1st	per box	£	s. d.	Ditto, L.B.	24	0	0
IX Do., 1st quality	2	4	0	Ditto, W.B.	24	0	0
IX Do., 2d quality	1	16	0	Ditto, sheet	25	10	0
IX Do., 3d quality	2	2	0	Ditto, red lead	25	0	0
IX Coke	1	7	6	Ditto, white	30	0	32
IX Ditto	1	13	6	Ditto, patent shot	26	10	26
Canada plates, p. ton	18	0	15	Spanish	23	5	23
Ditto, at works	18	0	15	QUICKSILVER (p. bot.)	24	0	0

* At the works, 1s. to 1s. 6d. per ton less. 1 Add 6s. for each X. Terms: plate 2s. per box below tin-plates of similar brand.

REMARKS.—As the year draws towards a close less disposition is evinced to enter into any fresh business. Business men are rather engaged in reviewing the past—taking stock, as it were, of the year's transactions and laying plans for the future—than acting in the present. The present position of the Money Market tends to restrict operations generally, and more especially those of a speculative character. So much is this the case that there is barely any speculation at all in any of the markets; but the expectation of easier rates has been gaining ground, and the Bank returns all indicate that the pressure of the last few weeks is passing away. If this be so, and money becomes plentiful at the turn of the year, it would seem to be more than probable that ere long renewed activity may characterise our markets, and business once more flow in the ordinary channels.

COPPER.—Owing to the announcement of heavy charters which for the month of November are estimated at 5000 tons, and 2700 tons for the first half of December, the market has assumed a quiet appearance, and prices of Chili bars have dropped to 83½ to 84½. Sellers are not to be found, as a rule, below 84½, and that in very small quantities. Although charters are heavy, yet being chiefly by sailing vessels, the arrivals may be still distant, and the expected supplies will not be forth coming for some months; consequently, stocks are likely to be light, and any extra demand would cause a diminution, and while this is the case prices will not probably recede, but may possibly advance.

IRON.—True to the character which the trade has assumed now for so long a time, the report at the close of the year continues to be very unsatisfactory. In the North of England the demand is very limited, and prices have still a downward tendency, and there is still a difference of opinion expressed as to whether the bottom of the market has been reached. The approaching holiday season is always a quiet time in the iron as well as some other trades; but though the amount of actual business transacted be limited, it may be that quotations may not suffer, as producers appear to be under the impression that a demand may shortly arise which will suffice to sustain the market. The quotations for pig-iron are No. 1, 68s.; No. 2, 62s. 3d.; No. 3, 57s. At the present moment shipments are being made as "wind and weather permit" to the Continent, and the deliveries to Scotland continue to be kept up on a large scale. Owing to the severity of the late gales shipments have been deferred, but during the last week the weather has moderated, and deliveries have been going on again. Enquiries for finished iron have been floating about, more particularly for rails, but at such prices as cannot be accepted by makers with the existing rate of wages, and the price of raw material as now obtainable; still the fact that there are enquiries afloat is of itself encouraging, and that some of these enquiries have culminated in orders is still more satisfactory. Rails are quoted 7½ to 10s. for ordinary sections and ship plates, 9½ to 10s.; merchants bars, 8½ to 10s. The market for Scotch pig-iron is drooping, and closes at 79s.

Week ending Dec. 20, 1874...	Tons	9,156
Week ending Dec. 19, 1874...	Tons	7,234

Decrease since Dec. 26, 1873... 1,832

Total decrease since Dec. 26, 1873... 155,488

LEAD.—This market is quiet, but firm, and sellers are not disposed to submit to any concession in the face of the reduced production, which amounts in the last two years to several thousands of tons.

SPELTER.—There have been sales at our ports of Silesian at 23½ to 24½, and 24½ is asked for spot parcels.

QUICKSILVER.—24½ has been accepted. Market very quiet.

TIN.—Prices are improving, and a little speculative movement is observable: 94½ to 10s. has been paid for Straits, and 93½ for Australian, cash terms.

TIN-PLATES.—The market is firm, and, as orders are coming in pretty fast, buyers should not defer making their purchases, or they may have to pay higher prices. IC coke, 27s. 6d.

Messrs. James and Shakspeare.—COPPER: At the Swansea Ticketing, on the 22nd inst., 1069 tons of ore (chiefly Cape), averaging 25½ per cent. produce, fetched an average price of 16s. 11d. per unit. By private contract no sales have been reported; importers of Chili regulas refused 16s. 9d. per unit for some parcels to arrive, but although they are now willing to sell at a reduction thereon, smelters do not seem inclined to operate, unless at comparatively low figures. The Chili charters for the last half of November, and the first fortnight of the current month, have come to hand since we last wrote, being advised as 2600 and 2700 tons respectively; of which 2400 tons in bags, 2700 in ores and regulas for England, 100 in bars for France, 100 tons pure for the United States. The bulk of this quantity is, no doubt, coming by sailing vessel, and as, under these circumstances, a large proportion must be stowed on Friday last, will soon be realised; this alteration in the mode of shipment will reduce, however, the prices of forward metal to a level with those obtainable for spot parcels, and may eventually cause values of the latter to rise a trifle higher, as has been for some time past the case with tin. Influenced by the news alluded to above, bars have receded during the week 3s. per ton, but the quantity on spot being only one-half of what was available at the beginning of the year, it is rather easier to effect purchases to arrive than to secure metal now in stock at the same price; the sales of these descriptions have been materially affected by the import of Lake Superior ingots, of which about 4000 tons have been imported into Europe during the past six months, the bulk of which is now consumed. Second-hand parcels of English are yet to be had below the official quotations, but smelters continue to ask full rates, and are apparently confident that the present depressed condition of copper will prove to be only of temporary duration. Tin: Smelters are asking full rates for English, but the demand thereat is rather slack. Foreign sorts remain without much alteration; quotations, however, are a shade higher than on Friday last, especially for Straits on the spot, which is rather scarce. Australian has scarcely participated equally in the improvement noticed, the quality being so irregular; and until the smelters there fully understand the necessity of sending uniformly fine and clean metal, the whole of the imports from that quarter will suffer in reputation, although some

few brands, like the Torrens, do come fully up to the standard of fine. TIN-PLATES: Makers are very full of orders, and unable to undertake orders for prompt delivery.

Messrs. Vivian, Younger, and Bond.—COPPER: On the 19th inst. advices were received from Chili that the charters for the first half of December were equal to 2700 tons fine copper, and prices became rather easier, but some purchases of good ordinary brands having been made at about 85½ to 10s., the market became firmer until the 22nd, when the usual cablegram with Chili advices was received, announcing the charters for all November as 5000 tons of fine copper, being 2600 tons for the second half of that month, instead of 1300 tons, as had been reported. These very large charters from Chili during the last three months begin to attract considerable attention, and seem to point to an accumulation of stocks on that side of some alarming proportions. Since early in October, when they should have heard in Chili of the price of about 80½, the total charters (say) for three months amount to about 14,500 tons. It is thought by some that these charters may be made for shipment over an unusually long time, but as the actual shipments in November were advised as 5000 tons, it cannot be said this view is confirmed. Beyond some speculative purchases, the trade for the week has been exceedingly dull. In furnace stuff, 1069 tons of ore were sold at the Swansea ticketing yesterday at the average price of 16s. 11d. for an average produce of 25½ per cent. Unmanufactured copper continues very irregular in price, and the demand is only moderate. Manufactured ore remains inactive. Yellow metal is obtainable at rather lower prices, and there is also very little demand for export. TIN: There has been a gradual improvement in the price of this metal since our last, and a fair quantity of Straits and Australian has changed hands at from 92½ to 10s. to arrive to 94½ for spot parcels for the former, and 92½ to 93½ for the latter. Yesterday a large lot, about 150 tons, was purchased, Straits at 93½ to 94½ for arrival, and 94½ spot, and Australian at 92½ to 10s. and 93½. English tin has been in moderate request, and sales have been made at 97½ to 98½ for common ingot, but 98½ to 100½ are now the current rates, and only small quantities could be obtained at the former price. TIN-PLATES: Makers generally having now plenty of orders are holding for higher prices, which buyers are not willing to pay.

Messrs. French and Smith.—COPPER is flatter, owing to a corrected telegram of the charters for November giving the quantity as 5000 tons for the month. The charters for the first half of December are 2700 tons; the price, after receding to 83½, is rather firmer this afternoon. TIN: A good business is doing in foreign at slightly improved prices. English is steady.

Messrs. Pixley and Abell.—GOLD: The arrivals of have been large since our last circular: they comprise—\$92,000, from New York, 30,000, from the Brazil, and 44,000, from New Zealand; total, 666,000. The demand for export continues very quiet, and although only a portion of the above amount has come to London, the Bank has received 389,000, and further sums will undoubtedly follow. 10,000, in sovereigns, has been withdrawn for Lisbon. SILVER: The market continues tolerably firm, at 57½d. per oz., at which rate the amounts to hand this week have been taken. The arrivals comprise 62,000, from the Brazil, and 65,000, from New York. The Peninsular and Oriental steamer takes about 27,000, to Bombay. MEXICAN DOLLARS: Those on the market, brought by the French and West India steamers, have been sold at 56d. per oz., showing a further decline in price.

In the early part of the week the MINING SHARE MARKET was rather more active for tin mines, but the approach of the Christmas holidays seems to have put a stop to business, and there is very little new or interesting to report upon.

The mines in chief demand were Carn Brea, Dolcoath, Wheal Grenville, West Tolgus, South Roman Gravels, Tankerville; and business has also been transacted in a few others, such as Parys Mountain, Wheal Pevor, Pennerley, Penstruthal, Wheal Crebor, Van Consols, South Condurrow, Bog, and a few others.

Wheal Pevor shares have been lower, and leave off 5 to 5½; the tinstone (300 tons) realised 57½. Bog, 5s. to 7s. 6d. Carn Brea shares are better, at 55 to 57½. Cook's Kitchen, 8 to 9; Devon Great Consols, 2½ to 2¾; East Pool, 13 to 14; Great Laxey, 10½ to 11; Hingston Down, 1½ to 1¾; Marke Valley, 1½ to 1¾.

Dolcoath advanced to 49, 50 ex div.; at the meeting, held on Monday, a dividend of 12s. 6d. per share was declared. The accounts showed costs for three months up to Nov. 28, 13,466½; copper sold, 296½; tin ore (291 tons), 16,870½. The engine-shaft is now down 10½ fms. under the 314; lode worth 100½ per fathom for length of shaft—12½. The 314 west is worth 80½ per fathom; the 314 east 100½ per fathom. The mine is looking well, and if tin rises in price increased profits will be made. Old Treburgett preference, 12s. 6d. to 15s.; West Tolgus, 72½ to 75; at the meeting, held in Cornwall, a dividend of 14½s. per share was declared. The accounts showed costs for two months, 3250½; copper ores sold (607 tons), 3906½; profit, 656½. The mine is looking well, one point—a rise—worth 100½ per fathom; another, 80½; another, 50½; and three stopes in back of the 85 worth 112½ per fathom; the 125 end is worth 30½ per fathom. The return for the next two months amounts to 4102½s. 8d. and will have a larger profit than shown at the present. Parys Mountain, 8s. to 10s.; Pennerley, 1½ to 1¾.

Crenver and Abraham, ½ to ¾; the expenditure here (including 30,000, purchase money and 20,000, for unwearing the mine) has been 143,520, and the returns of tin and copper 43,500. The mines now show good prospects, but to enable the directors to carry them on, as it is hoped, profitable results it is necessary to raise funds, and they propose to issue 20,000, of debenture bonds on the security of the mines and plant; these bonds to be of 50£ each, and bearing interest at 12½ per cent. per annum. Penstruthal, 13s. to 15s. At North Trekerby meeting, held in Cornwall, the accounts show for nine months' labour costs to Oct. 31, 794½; merchants, &c., 324½. The ores sold realised 248½, showing a loss on nine months of 870½, and a debit balance of 973½. A call of 4s. per share was made. The report states that a large tin lode has been cut in the deep adit cross-cut north which is 10 ft. wide and worth 30½ per fathom. This cross-cut is to be extended so as to intersect the Highburrow lode.

Prince of Wales, 5s. to 11s.; at the meeting, held on Thursday, a call of 1s. 6d. per share was made. The accounts showed a loss of 260½s. 1d. on two months' working, and a debit balance of 331½s. 11d. The chief points of interest in the mine are in driving for the Silver lode and cutting ore in the 77, under where, in the 65, there was a course of ore 30 fathoms long. Roman Gravels, 12 to 12½; Rookhope Valley, 10s. to 15s. South Roman Gravels shares have advanced to 17s. 6d., 22s. 6d.; the mine has further improved in the 20 east, which is yielding splendid lead. The lode in the shaft also looks well. South Carn Brea, 1 to 1½; South Condurrow, 4½ to 5; South Crofty, 14 to 16; South Frances, 13 to 15; Tankerville, 8 to 8½; Tincroft, 29 to 30; Van, 20 to 22½; Van Consols, 2 to 2½; West Chiverton, 1 to 1½; West Esgrair Lode, 2 to 2½. Wheal Crebor, 15s. to 20s.; ore sold last week weighed off 179 tons, realised 1033½s. 16s. 8d. Wheal Grenville, 5 to 5½; Wheal Kitty (St. Agnes), 4½ to 5. Wheal Union, 3½ to 3¾.

Wheal Jane, 5 to 6; at the meeting, on Tuesday, the mine re-entered the Dividend List. It will be recollected that in March last the committee suggested to "suspend for a time," for whilst it costs us 65½ per ton to make our tin marketable, the smelters will only give 47½ or 48½ for it. The interests of the adventurers, therefore, cannot be advanced by continuing to work the mine at a certain loss, but while by suspending for a time we may be able to tide over these disastrous times without loss, and not remotely find coals, iron, and labour very much reduced in value, so that we shall have a double chance in a lower rate of materials, and a higher value for our tin. The price of tin having soon rallied, the suggestion, happily, was not acted on. A resolution was also passed authorising the purser to overdraw the banking account 3000½, subsequently increased to 5000½, that the tin market might be stocked for a time. The profit on the three months' working was 1445½s. 1s. 1d., and a dividend of 1½ per share was declared. The agents' report was very satisfactory.

Birdseye Creek, 2½ to 2¾; Cedar Creek, 1½ to 1¾; Chontales, 10s. to 12s. 6d.; Eberhardt and Aurora, 4½ to 5; Emma, 1 to 1½; Flagstaff, 1½ to 2; Frontino and Bolivia, 6s. to 8s.; Richmond, 6½ to 6¾; Sweetland Creek, 2½ to 2¾; Tecoma, ½ to ¾.

The Market for Mine Shares on the Stock Exchange during the week has not presented any noteworthy feature. The public abstaining from entering into new transactions at the close of the year, and the dealers chiefly occupied in arranging outstanding engagements, the business of the week has been upon a comparatively limited scale. The general tone of firmness, however, has been fairly supported, and the leading indications point to a marked revival of business upon the turn of the year. With the exception of copper, which has further declined, and still presents a drooping tendency, the position and prospects of the metal market are in every respect most encouraging, and it is believed that at least current values will be maintained.

American mines continue neglected, and scarcely any transactions have been recorded. Hydraulic shares, however, continue in moderate request, while a fair amount of business has been transacted.

Richmond Consolidated, 6½ to 6¾. Cablegram received—Week's run, \$57,000. The total make this season amounts to \$1,388,000.

Since Aug. 31, the end of the financial year, bullion has been made to the value of 136,000½; this gives an average weekly product of 8500½, but as the last seven weeks' runs average 10,400½, it is evident that a great improvement has taken place, no doubt mainly due to the increasing richness of the ore, which an eye-witness, lately arrived from Eureka, reports to run out of the furnaces like melted butter. By the statements in the Eureka papers it appears that from the end of September to end of November, between 300 and 400 tons of Richmond bullion had been forwarded by Pritchard's team line. The recent improvement in the state of the roads, which, according to the *Sentinel*, dates from the beginning of December has enabled the accumulated stock of bullion to be sent in more rapidly and facilitated the arrival of the coke from Elcho station, purchased some time since for use towards the end of the winter, when charcoal would probably be scarce. But for the breach of contract on the part of the captain of the French steamer engaged, to forward the refining apparatus, the accumulated bullion could have been treated ere this at Eureka; any loss of interest on bullion so retained, even for three months, would be doubly met by the saving in refining on the spot. The Rozan process of refining, the one adopted by the Richmond Company, is attracting increased attention in France in consequence of its proved success. The advantages claimed for it of combining great economy in labour by the rapidity of the process, with the great improvement it effects in the lead, render it especially suitable for the Eureka district, the mines of which will be consequently increased in value. The Richmond Company have the option of working the patent for Nevada. During the working season the company distribute in the neighbourhood about 20,000, a month in wages, stores, and freights; if a large refining business be created, the inhabitants of Eureka will participate in the advantages of an increased expenditure. Charcoal is now being freshly brought in on reasonable terms direct from the producers, without the intervention of contractors, who screwed down the workmen and screwed up the purchasers, threw up their contracts when the fuel got scarce, and raised a great clamour against the manager for breaking through a system that was even more injurious to the hard working multitude than to the company. As the time fixed for opening the first 45 miles of the new railway from the Palisade Station has passed, it may be assumed that three-fourths of the fuel and freight difficulties are already ended. The new manager—Mr. Rickard—who will probably be at Eureka early in February, will find greater facilities now than at any former period for largely increasing the productiveness of the mines and works. If the mine continues to develop ore as rapidly as it has done during the past three months, the number of furnaces will have to be increased next spring.

We learn that Mr. Clarence King, being about to visit the neighbourhood of Eureka, has been engaged to inspect and report on the present state and prospects of the Richmond Mine. At a time when, to less experienced eyes, the irregularity and vast size of the lode led the majority to the belief that it was only a great chamber of ore. Mr. King pledged himself to the view that it was a true fissure vein originating from below, and, therefore, certain to go through the limestone formation. Every step of the subsequent explorations has fully borne out this opinion. The lode is now traced several hundred feet ahead of the spot on which Mr. King formed his judgment, and the hanging and foot walls are more distinct than ever. The establishment of this ledge character of the ore is most important to the company, owing to the privilege accorded by the United States mining laws to the owners of all such true ledges or veins of following them to their termination, however distant that may happen to be. Mr. King's forthcoming report will afford a good test of the charges so frequently and designedly made that the statements issued by the authorities have been of a sensational character. The thin streak of ore going off to the left of the lode from the level below the Lizette tunnel, which had been disregarded previous to Mr. Probert's arrival, but on which he immediately ordered explorations to be made, is now developed to a great extent, and is yielding rich ore in large quantities. The fact that the company will shortly be in a state to tide over the future shortened periods between the times of bullion production and sale out of its own cash reserve taken in conjunction with the circumstance that, having paid off all former loans, the borrowing power to the extent of 50,000, exists intact, constitute a position of strength which is in itself an assurance against the probability of attack. By the latest accounts it appears that the mine is still improving, the deepest workings going down in fine carbonates.

St. John del Rey, 262 to 267½; at the general meeting, on Wednesday (reported in another column), it was stated that besides being in funds to pay the dividend and the last of the debentures, amounting to 5900½, and all drafts due before the arrival of the next gold, there are the investments in first-class securities amounting to 16,000½, to which has now been added 2530½. The dividend of 10 per cent. was authorised to be paid, and the warrants were posted on Wednesday evening. From the discussion which took place, it appears the prospects are so good as to warrant the expectation of much larger dividends next year. A cablegram received since the meeting announces the profit for November amounted to 7900½. Sierra Buttes, 1½ to 2½; Ditto, Plumas Eureka, 1 to 1½; these shares are flat, the last cable returns of the clean-up being unsatisfactory. London and Californian, ½ to ¾; sellers of this stock have preponderated, and the market is flatter in consequence, although the advices from the mines show there is no falling off in the richness of the ore. Independence, 1½ to 2½, and in demand; the advices from the mine are very favourable. The shaft is by this time sunk 50 ft., and the agent expects to meet with good quartz on taking down the lode. He also reports that he expects the December return will yield a higher produce of gold per ton than the November crushing. The debentures recently raised and the profits made during the past six months have augmented the resources of the company, so that now, after paying all liabilities, the capital available for developing the mine is about 9000½.

Blue Tent, 5 to 5½; the agent reports that he was washing steadily on an Enterprise claim, and expected to commence on South Yuba before the end of the year. Cedar Creek, 1½ to 1¾; the washing was progressing satisfactorily, and the agent expected to clean-up about Jan. 1. Birdseye Creek, 2½ to 2¾; the washing was continuing as usual. The new tunnel was in 519 ft., leaving only 256 ft. to finish. Sweetland Creek, 2½ to 2¾; owing to an impediment in the ditch, the washing has been slightly interrupted, though at the date of the last advices the washing was going on uninterruptedly. The dividend of 2s. per share was declared yesterday. Holcombe Valley, 1 to 1½; at the meeting, reported in another column, the Chairman gave an account of his visit to the mine. It appears from a communication from Prof. Price, received the day after the meeting, that the imperfectness of the concentration of the sulphurets sent him was the cause of their low assay. Portions of them were subsequently taken and properly concentrated, as they would be in a mill, with the proper appliances, and the samples so concentrated assayed over 5 ozs. of gold per ton of 2000 lbs. This test proves beyond doubt the value of the sulphurets. The only question remaining to be tested is as to the percentage of sulphurets in the rock, and this point Prof. Price is taking steps to ascertain.

Almada and Tinto, ½ to ¾; at the meeting, on Monday (reported elsewhere), it was shown that the net profit for the half-year ending June 30 amounted to 5019½, and that the balance now standing to the credit of the profit and loss account was 19,643½; and as soon as the cargoes of ore in transit had been realised the directors expect to be in a position to pay the dividend authorised at the last half-yearly general meeting. The newly-elected Chairman (Mr. P. F. Needham) expressed a hope that the next time he had occasion to address the shareholders he would be in a position to submit some very good news.

Cape Copper shares remain inactive at quotations, 30½ to 30¾; discouragement has been caused by the announcement of the manager at the mines that at Spectakel the principal stope has fallen off in value, and that the water supply for dressing purposes is getting low, so that it is impossible to keep up the returns from this mine—the prospects are rather gloomy, although there is still a chance of opening out some good ground in the back of the 36, north of incline: 735 tons of ore were sold by public ticketing on Tuesday,

at an average of 17s. per unit, realising approximately 19,900l.; the two previous sales realised an average of 17s. 10d. and 17s. 3d. per unit respectively.

Van, 21 to 23; the mine is looking much as usual—the agent reports that he was still meeting with patches of lead in the cross-cut at the 90. Van Consols, 2½ to 2½; the recent frost has not interrupted the water-power at this mine; the stream, being very rapid and large, has escaped the fate of many smaller streams which are used for working mines in Wales. The lode in the bottom of the mine appears to be now of a permanent lead-producing character, yielding 3 tons per fathom. Great West Van, 15s. to 20s.; the cross-cut to reach the main lead-bearing lode is being rapidly pushed forward; the usual returns of lead, 30 tons per month, are being made, and is expected to be largely increased when the main lode is intersected. Pennerley, 1½ to 1½; there is no alteration in the mine. The lode at Potter's Pit is looking very well for an improvement. The sale on Wednesday, 80 tons, realised 1234l. The frost is slightly interfering with operations. Bog, 1 to 2; the lode at the 175 has improved still further during the week, and is now worth full 6 tons per fathom. The sale on Wednesday, 60 tons, realised 15l. 10s. per ton.

Wheal Pevor, 5 to 5½; the tinstuff sold realised 571l., and a parcel of black tin will be sold on Thursday. Nothing new in the mine. Penstruthal, 13s. to 15s.; the shaft still continues of a uniform value and produce. A permanent and profitable mine is being rapidly opened out.

Subjoined are the closing quotations:—
Bog, 1 to 2; Carn Brea, 55 to 57; Dolcoath, 40 to 51; Devon Great Consols, 2½ to 2½; East Caradon, 1 to 1½; East Lovell, 8 to 8½; Hingston Down, 1 to 1½; Parys Mountain, 8s. to 10s.; Pennerley, 1½ to 1½; Penstruthal, 13s. to 15s.; Roman Gravel, 12½ to 12½; Tincroft, 20 to 30; Tankerville, 7½ to 8½; Van, 21 to 23; West Tankerville, 3½ to 3½; West Chiverton, 1 to 1½; West Bassett, 7½ to 7½; Wheal Grenville, 5 to 5½; Almada and Tinto, 5 to 5½; Birdseye Creek, 2½ to 2½; Cedar Creek, 1½ to 1½; Cape Copper, 3½ to 3½; Chontales, 3½ to 3½; Don Pedro, 5 to 5½; Eberhardt and Aurora, 4½ to 5; Emma, 1½ to 1½; Flagstaff, 13½ to 13½; Frontino and Bolivia, 5 to 5½; Independence, 2 to 2½; Last Chance, 3 to 3½; Malpas, 1 to 1½; Malabar, 3 to 3½; New Quebrada, 2½ to 3; Rio, 3 to 3½; Richmond Consolidated, 6 to 6½; Sweetland Creek, 3½ to 3½; St. John del Rey, 262 to 267½; Teocoma, 3 to 3½; United Mexican, 3½ to 3½; Blue Tent, 5 to 5½; Holcombe Valley, 1 to 1½; New Pacific, 7s. 6d. to 10s.; West Esqair Lie, 2 to 2½.

COLLIERIES AND IRONWORKS.—Owing to the impending holidays business has been restricted to very narrow limits, the following being among the shares chiefly dealt in:—Thorpe's Gawber, Bilson and Crump, Cardiff and Swansea, Chapel House, Whitehaven Iron, Silkestone Hall, Industrial Iron, and some others. Thorpe's Gawber, 14 to 15; nothing appears to be known respecting the next dividend, which, whatever may be its amount, cannot at earliest, it appears, be declared before February. Cardiff and Swansea, 3½ to 4½; Whitehaven Iron shares have been in some demand, and close 5 to 6. Welsh Freehold, 8 to 8½; the transfer books, it is announced, will remain closed from the 28th inst. to Jan. 2; Chapel House, 4 to 4½; Milner's Safe, ½ to ¾ prem.; Cleve Hill, 6s. to 8s.; United Bitumens, 5s. to 7s. 6d.; West Cumberland Iron, 11 to 12; Staveley Coal, 11 to 12; Skerrie Iron, 5½ to 6½; Silkestone and Dodworth, 21 to 21½; Sheepbridge Coal, 53 to 53½; John Bagnall, 7 to 7½; Industrial Coal, 2½ to 3½; Ebbw Vale, 7½ to 7½; Henry Briggs, 24 to 25; Earle's Shipbuilding, 13 to 11 dls.; Norton Brothers, ½ to ¾ prem.; Palmer's Shipbuilding, 17 to 18; Lydney and Wigpool fell 15s. yesterday—3½ to 3 dls.; New Sharlston shares are lower, closing 5 to 6; South Cleveland Iron, 8 to 10; Rhymer Iron, 35 to 40; Central Swedish Iron, 4 to 6; Lehigh and Wilkes Barre Coal, 85 to 90. Richards and Co., 4 to 4½ cum div.; the 10 per cent. dividend will be payable on the 15th prox. Ifton Rhyne, 2 to 2½; Silkestone Hall, 30s. to 35s.; Pelsall Coal, 11 to 13. There is a better enquiry for Cardiff and Swansea shares, the dividend just declared having brought in some buyers. Bilson and Crump Meadow, 100 paid, 11 to 11½; these shares are remarkably well held. West Mostyn, 12 per cent. preference, 3½ paid, 3½ to 3½. The iron trade of the North and the South Wales coal trade continue very depressed, but there appears a general opinion as to an improvement early in the New Year.

At Swansea Ticketing, on Tuesday, 1096 tons of copper ore were sold, realising 23,756l. 8s. The particulars of the sale were—Average standard for 9 per cent. produce, 105l. 5s. 6d.; average produce, 25½; average price per ton, 21l. 13s. 6d.; quantity of fine copper, 280 tons 17 cwt. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Perton.	Per unit.	Ore copper.
Dec. 8.....	1432	107 4 6	18 11-16	216 0 3	17s. 1d.	485 8 9
" 22.....	1096	105 5 6	22½	21 13 6	16 11	84 11 6

Compared with the last sale, the decline has been in the standard 1l. 19s., and in the price per ton of ore about 10s. There will be no sale on Jan. 5.

The Rio Tinto Company give notice that the interest warrants for the payment of 5s. 2d. per share will be posted to proprietors on the 31st inst., and paid on Jan. 1.

THE PROVIDENCE MINES.—The lode has been cut on the other side of the cross-course at Hawk's shaft, and is very good, it being of more value than where it was thrown out of its course; other parts of the mines have also improved. The financial position of the mines is good, and no call will be required at the next account meeting, as intimated in the *Mining Journal* of Saturday last. The mines are producing about 15 tons of tin per month of four weeks, and the labour cost for the same period is about 550l. They are a little over paying all costs.

CHAPEL HOUSE COLLIERY.—For the year ending Oct. 31 the average output of coal was 6300 tons per month. Last month, however, the output amounted to 8000 tons. Fifty new wagons have been ordered, and as any increase of rolling-stock will enable the company to increase its output, there is a prospect of early improvement in the profits which already enable the company to divide 15 per cent.

GEORGIA TIN AND COPPER MINING COMPANY (Limited).—Resolutions have been passed to wind-up this company voluntarily, and Mr. R. Mitchell, of Abchurch Chambers, Abchurch-yard, has been appointed liquidator.

LLANRWST MINE—FATAL ACCIDENT TO A SHAREHOLDER.—Among the shareholders who attended the meeting of the Llanrwst Company at the mine on Monday was Mr. Tamblin, stock and share dealer, of Cornhill Chambers, London, who remained until the following day in order to go underground. On Tuesday whilst underground he fell 6½ fms. from the intermediate platform at the foot of shaft, never recovered consciousness, and died shortly after of the injuries sustained. Capt. Knapp, who was with him at the time, was not to blame in the matter.

THE PRODUCTION OF LEAD AND SILVER.

The returns of the ores raised in the United Kingdom during the year 1873, as prepared by Mr. Hunt, show a marked decrease in the production of lead and silver as compared with previous years. This fact has evidently been overlooked by those connected with our lead mines, for during the last two or three years companies have been formed for opening out new ground, in which it was expected that the output would be very large indeed. Still we have it on record that the productive power of our lead-bearing districts has gradually fallen off the last 20 years. In 1855 the quantity of lead ore raised in the United Kingdom was 99,330 tons, and which yielded 561,906 ozs. of silver, whilst in 1873 the output of ore was only 73,500 tons, giving 524,307 ozs. of silver. This great decline falls to the lot of all the English counties excepting Shropshire, and to the Welsh counties with the exception of Montgomeryshire, where the returns from the Van Mine have raised that county to the first position in North Wales. This will be apparent if we only look to the position of that exceptionally fortunate property during the last few years. Thus, in 1873 the quantity of ore raised in that county was 3588 tons of lead ore, while the Van yielded 615 tons, whilst in 1873 the output was 7976 tons, towards which the Van contributed 5740 tons. That the falling off has been a very serious one indeed will be seen by taking the quantity of ore raised for two periods distant from each other by seven years. The tonnage of lead ore and silver raised in England for the years 1867 and 1873 was as follows:—

	1867.	Ozs. silver.	1873.	Ozs. silver.
Cornwall.....	5,645	314,326	3,909	129,509
Devonshire.....	803	13,719	676	6,510
Bomersetshire.....	884	1,700	752	—
Staffordshire.....	4,917	1,000	4,442	750
Lancashire.....	83	—	74	—
Shropshire.....	690	2,060	—	—
Lincolnshire.....	4,506	—	7,288	2,400
Yorkshire.....	7,839	3,000	4,986	1,500
Cumberland.....	5,683	31,022	2,425	16,175
Westmoreland.....	2,418	24,142	1,530	16,850
Durham & Northum.	22,574	77,678	18,623	47,962
Total.....	58,742	499,647	44,705	212,558

From the above figures it will be seen that Lancashire has altogether disappeared from the list of ore-bearing counties in England, whilst all the others show a most decided decrease, with the exception of Shropshire, in which the Roman Gravel, in 1867 only produced 840 tons of ore, against 2550 tons in 1873. There are probably more mines in Derbyshire than in any other county in England, yet nearly one-half of the ore raised comes from one of the mines of the Messrs. Wass. In the other parts of the kingdom we find that in some places there has been a considerable increase in the production,

whilst in others there has been a decrease. The quantities of lead ore and silver raised in 1867 and 1873 were as follows:—

	1867.	Ozs. silver.	1873.	Ozs. silver.
Cardigan.....	7,539	63,113	5,373	39,689
Cardmarthen, &c.....	829	3,585	604	2,518
Montgomeryshire.....	3,588	14,520	7,977	54,957
Pembroke, &c.....	817	2,175	178	1,451
Denbigh.....	5,857	35,082	2,997	11,339
Flintshire.....	4,202	29,700	1,941	12,537
Creagh in Glam.....	303	824	966	2,082
Isle of Man.....	3,799	165,170	4,372	163,068
Ireland.....	1,883	12,140	1,186	4,420
Scotland.....	2,954	11,428	3,207	10,720
Total.....	34,604	335,747	28,705	302,751

It will be seen that the richest ore in the kingdom is that of the Isle of Man, giving more than 40 ozs. of silver to the ton of lead ore, Cornwall standing next. A good many mines during the last few years have been re-opened in Flintshire, but it is evident that they have been the reverse of productive. These facts and figures will, no doubt, be of some use to those who take an interest in lead mining, for they are such as have not yet been made known to the public.

STOCK EXCHANGE YEAR BOOK AND DIARY.—So large an amount of business is now done in joint-stock companies' shares, and speculators are so constantly changing their investments from one security to another, that the Stock Exchange Year Book and Diary, the object of which is to provide a reliable and inexpensive digest of information relating to public securities and joint-stock companies, will prove of great utility to a very large number of readers. It appears that the amount of the securities known to the markets of the United Kingdom, and of which particulars are given in the year book, is no less than 4,439,459,128l. Government Stocks, representing investments of 3,030,261,694l.; railways, 1,115,792,562l.; banks (paid up), 98,067,588l.; and other companies and securities (paid-up), 217,337,286l.; and considerably more than half of these, or about 2,450,000,000l., are actually held in this country. The Editor (Mr. Skinner) very truly remarks that the sole claim to usefulness of such a work as this is the correctness of its statements, and that no pains have been spared to secure this all-important consideration. In the case of Government securities, the whole amount of the debts which have to be considered in judging of the probability of the interest being punctually paid, and in the cases of railways and other public companies the names of the directors, officers, &c., and in many instances the purchase-money paid, are carefully given. The volume, which is published by Messrs. Cassell, Petter, and Galpin, is very complete, and appears to have been compiled quite regardless of trouble; it is altogether an extremely useful and necessary work, and as a diary (a week in the opening) upon fine writing paper is combined with it, it can readily be adopted by all men of business, as it will not add to the number of books necessarily occupying a place on the office table.

THE MILLION ON THE RAIL.—In a carefully written pamphlet bearing this title Mr. G. W. Jones (of Messrs. Davies and Co., of Finch-lane, by whom it is published) describes a modification of his suggestion for universal penny railways, which formed the subject of a paper read before the Society of Arts in March, 1870. Mr. Jones very truly states that more damage is often done to the seat of a first-class carriage by the passenger's dirty boots, or his luggage, than by sitting on it, and the shrewd witnesses have not been able to define the difference of cost of conveying a full carriage and an empty one. He urges that when the third-class fare is reduced to its proper proportion—when the third-class passenger is carried by the slow trains of a company "a stage" of five or ten miles for a penny—the numbers who will find occasion or excuse for "going by the rail" will be so great that the number of trains must be increased, and every train must be lengthened. It is highly probable, also, that the season ticket system, which is now received in tanks containing water, to which is added hydrochloric acid, which dissolves the phosphorus of iron, disengaging sulphuretted hydrogen, and also dissolves others of the earthy matters present. The coke is then washed with water and dried. The process is most readily effected upon small coke or dust, and it is, therefore, in some cases preferable to pulverise the material in the first place, and to agglomerate it into blocks after purification. The process is applicable to peat and anthracite, and lignite treated in this manner gives a product which has the qualities of wood charcoal.

PURIFYING COKE.—Mr. S. DE NOUAILLON, of Périgueux, has patented some improvements in treating mineral coals by acids. The invention relates to a process for purifying coke from sulphurous and other detrimental compounds. The combustible is heated to redness with exclusion of air, whereby the pyrites or bi-sulphide of iron which it contains is converted into phosphoric acid, which is then received in tanks containing water, to which is added hydrochloric acid, which dissolves the phosphorus of iron, disengaging sulphuretted hydrogen, and also dissolves others of the earthy matters present. The coke is then washed with water and dried. The process is most readily effected upon small coke or dust, and it is, therefore, in some cases preferable to pulverise the material in the first place, and to agglomerate it into blocks after purification. The process is applicable to peat and anthracite, and lignite treated in this manner gives a product which has the qualities of wood charcoal.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 19—	Powell Consolidated.	30	£15 8 6	Walker, Parker, and Co.
23—	Bog	60	15 10 0	Panther Lead Co.
—	Pennerley	80	15 8 6	Sheldon, Bush, and Co.

PURSUANT TO A DECREE OF THE High Court of Chancery, made in a Cause AID V. SMITH, 1874, A. 91, the CREDITORS OF HENRY GEORGE SMITH, late of Greenwich, in the County of Kent, Merchant, deceased, who died on or before the 1st day of April, 1873, and on or before the 9th day of January, 1875, to send by post, pre-paid, to Mr. WILLIAM HINE HAYCOCK, of No. 4, College Hill, Cannon-street, London, E.C., the Solicitor of the Defendants, the Executors of the said Henry George Smith, their Christian and Surnames, Addresses and Descriptions; the full particulars of their Claims; a Statement of their Accounts, and the Nature of the Securities (if any) held by them; or, in default thereof, they will be PEREMPTORILY EXCLUDED FROM THE BENEFIT OF THE SAID DECREE. Every Creditor holding any Security is to produce the same before the Vice-Chancellor, Sir Richard Malins, at his Chambers, situated No. 3, Stone Buildings, Lincoln's Inn, Middlesex, on Thursday, the 14th day of January, 1875, at Twelve o'clock at noon, being the time appointed for adjudicating on the Claims.
ALFRED RAWLINSON, Chief Clerk.
Dated this 10th day of December, 1874.
GEO. RODDAM BURN, 33, Carter-lane, Doctor's Commons, Agent for Parker and Son, of Lewisham, Plaintiff's Solicitors.

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D. ERNEST MELLISS, A.M., Ph.D.,

MINING ENGINEER AND GEOLOGIST,

52, BROADWAY, NEW YORK, UNITED STATES,

EXAMINES and REPORTS upon MINERAL and other LANDS, MINES, ORE BEDS, &c., either in or out of the United States.

Information furnished in regard to any of the American Mining Districts. Dr. MELLISS has had special experience in the Silver and Gold Mines west of the Rocky Mountains, and in the Coal and Iron Region of the Southern States.

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ANTIMONIAL OR HARD LEAD, LEAD MATTE, LEAD SLAGS, LEAD ASHES, SULPHATE OF LEAD, COPPER SLAGS, COPPER REGULUS or MATTE, TIN ASHES, and TIN SCRUFF.

MIXED METALS and DROSS, containing LEAD, COPPER, TIN, or ANTIMONY.

A. H. KENRICK,

ENGINEER,

MINING MACHINERY AND METALS,

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Commission Agent for the Sale and Purchase of Mining and other Plant, ENGINES, BOILERS, RAILS, TRUCKS.

Steel Castings and Wire Ropes supplied direct from the Works at the Manufacturers' Prices.

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WORKS: TEAMS, GATESHEAD;

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This company is now fully registered, and in full operation, doing at present a remunerative business, and capable of great extension.

25 per cent. dividend may be fairly anticipated.

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Prospectuses and Forms of Application, with Testimonials, may be had, and shares taken up, by applying to the Bankers, Solicitors, Auditors, or to the Secretary, Mr. PHILIP GRANT, at the registered office of the company, 60, Market-street, Manchester.

A limited number of shares only remain to be taken up for the present.

Responsible agents wanted in all large towns.

LONGDEN'S LIST.

FOR SALE.—CHINA CLAY SETT, in FULL WORK. SILVER-LEAD SETT, in WORK. Very low price for cash. HEMATITE (RADIATED) SETT—60 per cent. pure iron. Price low.

WANTED.—ONE THOUSAND TONS OF ANTIMONY. Give prices f.o.b. MANGANESE—ANY QUANTITY, HIGH OR POOR ORE. Prices f.o.b. HENRY LONGDEN, MINING EXPERT, 18, COLEMAN STREET, E.C.

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(LIMITED).

WORKS—28, FREETH STREET, AND ROTTON PARK STREET, BIRMINGHAM.

STEEL CONVERTERS AND REFINERS, ROLLERS, FITTERS, AND FORGERS.

MANUFACTURERS OF ALL DESCRIPTIONS OF CAST STEEL, HEAVY AND LIGHT FORGINGS, STEEL SHAFTS, PISTON RODS, SHIP AND BOILER PLATES, CAST SHEAR, BAR, SPRING, SHEET, and EXTRA SPECIAL TOOL STEEL, warranted.

MANUFACTURERS OF EXTRA SUPERIOR FORK and SHOVEL STEELS.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY

DISTRICT UNDER THE CHARGE OF THOMAS EVANS, Esq., H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 14th day of January next, and CANDIDATES INTENDING TO PRESENT THEMSELVES at SUCH EXAMINATION must, on or before the 1st day of January, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
WM. SAUNDERS, Secretary,
49, FULSTREET, DERBY.

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

THE COPPER STANDARD.—With metal at a high price, and business brisk, the sudden fall of the standard at the Ticketing last week has caused great surprise in the West. The standard generally in its upward course is painfully slow; its drop is oftentimes tremendously rapid.

THE NASCENT COPPER PROCESS.—The result of the experiments on the mineral in the Gunnislake district is looked forward to with no little curiosity. The extraction of silver in paying quantities from the barrows in this neighbourhood is "a consummation most devoutly to be wished."

COURT GRANGE.—The stopes in the western part of the mine are now worth in the 16 fm. level 12s. per fathom, and in the level above 14s. per fathom.

CATHEDRAL.—The lode in the shaft is

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

BORROWDALE PLUMBAGO AND LEAD MINES COMPANY.—So far from the old plumbago works at Borrowdale having remained dormant for 32 years, as stated by Mr. W. White in his communication published in the *Mining Journal* of Dec. 12, the mineral has long been regularly worked, and so recently as Dec. 7 the manager, Mr. W. Salmon, wrote that the prospects of the mines were improving daily.—T. H.

LLANARMON.—Can any of your readers supply any reliable information regarding the Llanarmon Lead Mine, about which very highly coloured representations were made in the original prospectus, and which seem far from being realised? The shares were quoted in the Share List at 2½, but the directors are asking for more money to enable them to carry on their explorations, which are for the present, I believe, suspended.—INVESTOR.

CREATION OF POWER.—“J. M.” (Manchester).—The assertion that by the use of your mechanical arrangement you can make a one-horse engine do the work of five, such engines working without your machinery, is based upon some error in your calculation or judgment. Such a combination of cams and levers could not transmit the power at all without very considerable waste. But if, as you suppose, one-horse power applied to the pulley behind becomes five-horse power at the pulley in front, it follows that if you connect the two pulleys by a belt the machine will start off and run furiously, as there will be four-horse power to spare. The absurdity of this supposition is obvious.

“J. W.”—If there was the misrepresentation you state you could prosecute the parties for obtaining money by false pretences, but it might cost you as much as the amount of the call. Nothing can justify the neglect to publish a balance-sheet for so long a period; but it is difficult to see how a mine can be put into liquidation without every shareholder having had notice of the meeting at which the resolution to wind-up was passed. Any good criminal solicitor could be consulted in such a matter; but it is well to consider the risk of expense to be incurred before commencing litigation.

SCALE FOR ADVERTISEMENTS.—Our charge for general advertisements is—6s. six lines and under, 4s. 1 per line afterwards, 8d. Average, 12 words per line.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

Received: “B. A.”—“J. R.”—“J. H.”—“J. A. E.”—“F. G. S.”—“Shareholder” (Cwm Erbin)—“N. T.” (New York)—“Shareholder” (West Chilverton)—“T. M.”—“Stannum” (Breaux): Next week—“W. P.”

* * * Going to press a day earlier than usual will, of course, interfere with our arrangements, and may cause annoyance to many correspondents from the omission of their communications; but we will endeavour to make all as regular as we can, by the insertion of omitted matter, in next week's Journal.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, DECEMBER 26, 1874.

THE COAL TRADE IN 1874—A RETROSPECT AND A FORECAST.

It cannot be said of the coal trade of 1874 that it has been in any respect as remarkable as either of its predecessors. It has not been such a marvellous year as 1873 in any one respect, for in the latter year prices both reached their highest culminating point, and sustained the fate also that befel Humpty Dumpty. Prices had begun to recede towards the close of last year, and before January, 1874, there was a reduction varying from 50 to 60 per cent. as compared with the prices realised in January of the immediately preceding year. Since then there has been a gradually augmenting supply and a gradually diminished demand. The obvious result has followed of reduced prices and depressed trade, so that at the present time the coal trade cannot be proved to be in any respect better than it was previous to the enormous inflation of demand that commenced towards the close of 1872. And yet coalowners generally will, no doubt, be constrained to admit that 1874 has not been a thoroughly unprosperous year. The iron trade has undoubtedly passed through many vicissitudes, and presented many perplexing and discouraging aspects within that period; but these have followed less from the inherent weakness of the iron trade than from the troubles that have arisen from time to time in connection with the relations of employers and employed in cognate branches of industry. It was hardly to be expected, perhaps, that the miners would submit without some resistance to the repeated reductions which the altered condition of trade demanded in their earnings; and hence we find that the immense falling off in the make of pig-iron in Scotland, Staffordshire, Cleveland, and Wales at different periods of the year were the immediate result, not of the absolute necessities of the industry, but of repeated, and in some cases protracted, strikes of miners against the reductions proposed in their wages. The process of returning to a former level of trade has been a very painful and laborious one. Industry has had to pass through repeated agonies in the fulfilment of the difficult achievement. But the task has now been all but accomplished; and although neither the value of the materials produced nor the remuneration of those employed to produce them have receded so far back as the low and ill remunerated point from whence they took their rise, there is good reason to hope that, with few exceptions, the general aspect of our iron and coal trades (for the two are inseparably bound up in each other) are much more normal and healthy than they have been at any time during the last four years, notwithstanding the exceptional prosperity enjoyed during part of that time; and that we have now reached a safer and more certain basis from which to operate in the future. It is true, indeed, that one or two branches of the iron trade are at the present moment exceptionally depressed; but the pig-iron trade, which is the true barometer of metallurgical and mining industry, was never in a more promising condition, the greater part of the blast-furnaces in Wales, Scotland, Staffordshire, and Cleveland being in operation; while the stocks of iron both in makers' hands and public stores are extraordinarily low. If the present aspect of the pig-iron trade is maintained (and there is reason for hoping that it will even improve with the turn of the year) there is no reason to fear for the immediate future of the coal trade. When we consider that 300 out of every 1000 tons of coal raised in the United Kingdom are absorbed in metallurgical purposes, it is obvious that so long as the iron trade is ordinarily prosperous the coal trade cannot be very greatly depressed.

It is, of course, impossible to say at the present time how far the production of coal in this country during 1874 will bear comparison with the production of former years. On the whole, it will probably be considerably less than the production of 1873, taking into account the falling off in the consumption for manufacturing purposes. In the Cleveland district alone, where some 60 per cent. of all the coal raised in the great South Durham coal field is used for iron making purposes, it is estimated that the make of pig-iron for this year will be 300,000 to 400,000 tons less than the make of 1873; while there has been a more than a corresponding falling off in the production of finished iron. On the other hand there has been a slight excess in the export trade, although it is not to be expected that the increase under the one head will make up for the deficit under the other. Apart from the serious falling off in the demand for manufacturing purposes, the coal production of 1874 has been greatly interfered with by the labour disputes in Scotland, West Yorkshire, South Staffordshire, Wales, and other districts, all which have involved very serious losses to both employers and employed. It is interesting in this connection, and one of the most hopeful signs of the times, to notice the increasing disposition on the part of masters and men to refer their difficulties to the arbitration of impartial and independent referees. The arbitration on the proposed reduction of 20 per cent. in the Durham coal trade is, perhaps, the most remarkable case of its kind that has occurred during the past year. In that arbitration Mr. LEEHAN, M.P., and Mr. DAVID DALE represented the masters, while Mr. BURT, M.P., and Mr.

LLOYD JONES represented the men. The amount of money at stake was something almost beyond all parallel, being estimated at 18,000, to 20,000, or one-fifth part of the earnings of more than 50,000 men, but the matter was amicably settled under the award of Mr. RUSSELL GURNEY, M.P., the ultimate referee, who decided on a reduction of about 9½ per cent. in the wages of all underground workers. It may be here noted that this arbitration was conducted on a system somewhat different from any that had preceded it. Each side selected two arbitrators, men of their own sympathies and interests; and, as it happened, they were compelled rather to take up the position of advocates than of independent judges and referees. In a case of this kind it is extremely difficult to discern where the functions of the arbitrator end and those of the advocate or counsel begin; and this is a difficulty which ought, as far as possible, to be avoided, and which easily may be avoided by allowing a competent representative to conduct each case, and by having one arbitrator only instead of four. It may be, and it sometimes is, a difficult matter to make a selection of an arbitrator by mutual consent; and, of course, this difficulty is obviated where each has the power to select one or two (as the case may be) for themselves; but then in the latter case there is a very strong *prima facie* presumption that the arbitrators will fail to agree, and that a final and independent referee will after all—as in the case of the Durham miners—require to be appealed to. In any form, however, arbitration is better than a strike or a lock-out, and where it succeeds in its purpose it should not be too closely criticised as to its rationale.

At a time like the present, when the cost of coal has fallen to its lowest practicable level, compatible with the return of anything like fair profits, it behoves every coalowner to consider how far he can economise the working cost of getting coal. Much has been written in the columns of the *Mining Journal* respecting the importance of coal-cutting machinery, and its probable economic results. It has been proved repeatedly that by the application of coal-cutting machinery it is possible to work coal at a considerably less cost than by hand, the difference of cost varying, of course, according to the capacity of the machine employed and the nature of the seam upon which it is set to work. Like all great revolutions, the introduction of mechanical appliances in the getting of coal makes its way but slowly, and it may be that the events of the past year have not materially facilitated the result of substituting generally mechanical appliances for hand labour in the getting of coal. But in a quiet and unobtrusive way progress has undoubtedly been made. Increased attention has been paid to the economic effects of using coal-cutting machinery, and numerous experiments have been made at different collieries with the machines of the Messrs. BAIRD, FIRTH, JONES, WINSTANLEY, CLAPP, and some others, all tending to show that the barriers of prejudice are being broken down, and that upon the removal of certain now current doubts and obstacles the great achievement aimed at by the numerous patentees of coal-cutting machinery, and by men like FIRTH, and LINDSAY WOOD, of Hetton, who have incurred enormous cost in perfecting such appliances will become *un fait accompli*. Coal-cutting machines have not hitherto been more generally adopted because in most cases it involves a very large first cost to set them in operation, although the machines by themselves do not cost more than 150*l.* to 250*l.*, because the laying down of such machinery will interfere to some extent with the work of the colliery, because there is a want of agreement as to the best machinery actually at work, and because of prejudice and obstruction on the part of masters on the one hand, or of the men on the other. The last difficulty is melting away, the first is easily surmountable, the second is less a difficulty now (when profits are so little) than at any time during the last four years, and it will probably never be found that for all purposes and in every respect one particular machine is better than all its rivals, any more than it is now agreed that one particular form of engine is superior to all others. The Messrs. BAIRD, of Gartsherrie, have now built a large establishment exclusively for the manufacture of the machine that bears this name, and at a number of the principal Scotch collieries the Gartsherrie machine is now in successful use, while other machines, such as those of FIRTH, WINSTANLEY, and HURD are making fresh converts on this side the Border. It seems, therefore, that although the progress is slow, there is undoubted progress being made with this most important phase of the coal question, and quite as much has been done in this direction during the past year as in any of its predecessors.

Another twelve months' experience of the operation of the Mines Regulation Act, while revealing certain anomalies, such as those connected with the examinations and qualifications for colliery managers' certificates (about which there has been a good deal of discussion in our columns), has, on the whole, proved the effect of that measure to have been beneficial. Nearly all the evidence before us leads to this conclusion, and although the preliminary working of the Act must have been attended with no little irritation, annoyance, and labour—not to speak of considerable cost—the matured experience of both masters and men will show that in the main the provisions have been designed in a wise and generous spirit. It cannot, however, be denied that the Act has added some 20 per cent. in most cases to the cost of getting coal, and has prevented that commodity—under the present system of working—from regaining the same unvarying level of low cost that it maintained for so many years previous to 1872.

THE CITY COAL TAX.

We are not at all surprised to find that the Bill being promoted by the Metropolitan Board of Works for continuing the coal tax for 15 years beyond the date of its expiration in 1889 is meeting with a good deal of opposition. The object for extending the tax is for the purpose of setting various bridges in the metropolis free. The purpose is undoubtedly a good one, but as the tax goes a very long way outside the area governed by the Corporation and the Metropolitan Board, it affects a large population that can in no way be benefited by any improvements made by either of those bodies. This was pointed out with considerable force by a deputation that waited upon the Chancellor of the Exchequer on the subject a few days ago. One gentleman stated that in Brentford there were five manufacturers who consumed annually 60,000 tons of coal, on which they paid a duty of 225*l.*, although they received not the slightest advantage from the improvements made with the money, which were confined to the City. What the deputation asked for was that the coal and wine tax should only be levied when the present law expired within the boundaries over which the Metropolitan Board and Corporation had jurisdiction. The demand, we think, is by no means an unreasonable one, for we believe that the principle of making a distant place help to pay for benefits it cannot participate in is by no means fair. But we are also of opinion that some other tax might be fixed upon instead of on such an essential as coal, for it is a vital necessity to tens of thousands of very poor people in the metropolis, and for the want of which no doubt many in such inclement weather as the present die much sooner than they otherwise would do.

But to consume untaxed coal in London would certainly be a great novelty, for we are not aware that such a luxury was enjoyed by our predecessors, at least during the last 400 years. In Queen ELIZABETH'S time coal coming to London was taxed for the benefit of the nation at large, whilst CHARLES I. made the impost a very heavy one. After that so serious was the burden, that the House of Commons took into its own hands the regulation of the coal trade. Proceeding onwards, we find that after the great fire in London the Lord Mayor was allowed to charge a duty of 1*s.* per chaldron for rebuilding the city, which was afterwards increased to 3*s.* in 1670, for the purpose of rebuilding 52 new parish churches. Then an addition was made to the tax for the purpose of rebuilding St. Paul's. Coming down to a more recent date, we find that the rate of duty in 1775 was 8*s.* per chaldron, and in the early part of the present century it was advanced to 9*s.* 4*d.*, but at this period so high was the price, and so heavy was taxation generally, that for seven years there was no increase in the consumption of coal, for, whilst in 1800 the quantity imported was 1,005,000 chaldrons, in 1807 it was only 993,100. In 1812 the tax was 12*s.* 6*d.* per chaldron, and continued so up to 1814, when it produced 612,600*l.* After that year there was

a drop to 9*s.* 4*d.*, and in 1824 to 6*s.* per chaldron, which continued until 1832, when the present duty of 1*s.* 1*d.* per ton came into operation, the Act stating that the revenue was to be devoted to public improvements in the metropolis. The tax last year amounted to 424,790*l.* It will, consequently, be seen that from time almost immemorial the inhabitants of London have been taxed for every particle of coal they used, and why that particular article should be so treated more than others we are at a loss to understand. So far as we can see, there does not appear any reason why iron, steel, wood, bricks, or stone should not be taxed as well as coals; and there would be this in favour of rating any such articles, that by so doing the poorest of our inhabitants would be relieved of a burden on a commodity that they cannot well do without, and which is almost as essential to existence as bread itself.

At present the price is so high that a sufficiency to give as much warmth as is required by children, females, and the aged is only to be found in the homes of the well-to-do classes. In our mining districts a collier will consume a ton of coal, with perhaps only one fire-place, in five or six weeks, but the same quantity would in all probability have to last a London working man at least three or four months. But small as is the tax of 1*s.* 1*d.* per ton, the doing away with it would lead to a much greater diminution in the price than is represented by that sum. The tax keeps many persons from entering into the trade that would otherwise go into it; so that we should have more competition, instead of something very closely verging on a monopoly, whilst colliery owners would themselves sell direct from their pits, instead of allowing large profits to go into the hands of the merchants. Supply and demand would then be the great regulator of prices, which is not always the case as things are at present. We, therefore, feel that it is not only to the interest of coal proprietors, but more so to the public of the metropolis, that the duty should expire at the time fixed upon by the Act of Parliament, and we have no doubt but such will be the view taken by the parties who are most interested.

THE LABOUR LAWS COMMISSION.

The Commissioners appointed to enquire into the working of the laws affecting workmen, it is understood, have now brought their labours to a close for the present year at least, having taken a good deal of evidence with respect to the Masters and Servants Act and the Criminal Law Amendment Act. They some time since completed their enquiry with respect to the Masters and Servants Act, and the probability is that the full and complete report will be in the hands of members of both Houses by the time, at least, of the opening of Parliament, if not before. We need scarcely say that it is looked forward to with considerable interest by the leaders of the various Working Men's Associations throughout the country, and by none more than those connected with the iron and coal trades. As might be expected, Mr. MACDONALD has been indefatigable in his exertions on behalf of the Trades Unionists, as has also Mr. T. HUGHES, to some extent, but then they have at times to contend with practical and clear-headed men like Mr. ROEBUCK, Mr. GURNEY, Mr. BOUVIER, and others. Some of the evidence taken has been as much matter of opinion as of fact, and, of course, must be taken for what it is worth. As an instance, we find that a witness from Highfield said that he doubted whether the masters did not break their contracts quite as frequently for their numbers as the men did. On being pressed, however, he admitted that he was not aware of any case where a master had been summoned for a breach of contract by men. Here Mr. MACDONALD suggested a reason, by remarking:—“Is there not this reason also—that the men have no confidence that if they were to bring a case forward the tribunal would give them what they asked for, although they were found to be in the right?” Such an opinion may be entertained, and probably is, by a considerable number of workmen, but we do not think that there is the least ground for it, although, like ordinary mortals, magistrates doubtless err at times, but this is less likely to be the case with stipendiaries than with the ordinary unpaid magistrates. Those, however, who have carefully gone through the evidence will agree with us that so far as regards the Masters and Servants Act no case has been made out for any change in the law. Cases of hardship have taken place, we believe, in the carrying out of the Act, but this has been no fault in the law itself, but only in the administration of it, for we must candidly admit that magisterial decisions, not only with regard to disputes between masters and men, but with respect to almost every offence, are not only at times uncertain but most conflicting, and, in some instances, apparently harsh. In fact, there is nothing like uniformity with respect to the penalties for similar offences, for what in one part of the country would lead to the fine of a few shillings, in another part would lead to the infliction of as many pounds. It is the same also with respect to imprisonment. What is, then, required, in our opinion, to remove all grounds for complaint is to endeavour that the punishment inflicted on those who have been guilty of any laches should be as even as possible. There is great difficulty indeed in devising any measure by which such a desirable consummation could be achieved, but it would certainly be worth trying.

We are not aware that in our ironmaking and mining districts there are many complaints as to the magistrates being in any way biased in favour of their own class, whilst by the Mines Regulation Act of 1872 the owner, agent, or manager of a colliery, or the father, brother, or son of such persons, cannot act in respect to any offence under the Act. Still, anomalies in the administration of the law, it is to be regretted, are of frequent occurrence, and in the preliminary report of the Commissioners a number of cases heard under the provisions of the Masters and Servants Act are given, which certainly bear out our remarks, for we find that for some apparently trifling offence in one place the punishment appears to be very heavy, when compared with what has been given for a similar offence in some other part of the country. In one instance we find that an apprentice at Troon in an iron shipbuilding establishment, who ran away, was ordered to pay 4*l.* 15*s.*, or be imprisoned for 30 days in default, whilst another lad, at Exeter, who absented himself on Easter Monday, was sent to prison for six weeks, whilst another runaway lad had three months. In cases of breach of contract by workmen the same differences appear in the inflicting of penalties. At the Lesmahagow Colliery a roadman got drunk whilst in charge, and then left his work; the compensation was fixed at 10*l.*, and the man was sent to prison for 15 days. In a case in Northamptonshire, for neglect of work, the compensation was stated to be 7*l.*, and the defendant was sent to prison for three months. These conflicting sentences alone are calculated to seriously impair the value of the Masters and Servants Act, which certainly appears on the face of it to be fair alike to masters and workmen, for by it both the complainant and the defendant can be heard, so that after hearing both statements it is not difficult to come to a true decision. Whether any system can be brought into operation whereby the Act can be more equally administered than it appears to have been we are not aware, but we do believe that were some effort made in that direction the law would be far more satisfactory to working men than it now is. Looking at the Criminal Law Amendment Act, and how seldom it is invoked, we cannot see what benefit its repeal would confer on the honest working man. But it should be borne in mind that the Act does not apply to working men only, for it clearly states that any persons doing certain things would render themselves liable to imprisonment. What the issue will be it is not easy to divine, but we anticipate that the report of the majority of the Commissioners will not recommend any material alteration of either of the Acts, although it may suggest some means by which both laws may be more equitably and evenly administered. If that is done then we think that all cause for complaint will have been removed.

COAL AND IRON IN THE UNITED STATES.—The quantity of anthracite coal marketed in Pennsylvania to Nov. 21 this year amounted to 17,248,132 tons, against 18,097,371 tons in the corresponding period of 1873, showing a decrease this year of 849,239 tons. The bituminous coal movement of Pennsylvania to Nov. 21 this year amounted to 2,980,543 tons, against 3,033,202 tons in the corresponding period of 1873, showing a decrease this year of 52,749 tons. The general

decline for the first 47 weeks of this year, as compared with the corresponding period of 1873, was accordingly about 910,000 tons. A rather sharp weekly reduction in coal production is expected to characterise the Pennsylvania coal trade until the close of the year, and indeed until next spring. At over 20 of the mines worked by the Reading Coal and Iron Company work has already ceased for the season. Work has been resumed at the new rail mill of the Renaissance Ironworks at Troy, under the old scale of employers' prices which the workmen refused to accept at the time of a recent strike. The Allentown Iron Company has been running upon full time all the year, but the other furnaces in the Lehigh Valley have been effecting only about half their usual production. The Phoenix Iron Company has one of its two furnaces blown-out, and it would be better, in the opinion of the management, to blow both out, but one is kept running for the benefit of Phoenix Villa.

IRON IN THE UNITED STATES.

The almost complete collapse of the American demand for our railway iron is one great cause of the depression which has stolen over the British iron trade with increasing force and severity as the winter has approached. The exports of our railway material to the United States have exhibited great languor during the year, but it was not until November that they sunk to their present terribly reduced point. Thus we only sent 1819 tons of our railway iron to our American cousins in November, while in November, 1873, they took from us 17,919 tons, and in November, 1872, 31,064 tons. The exports were, as we have already observed, dull and languid during the spring and summer, and for the eleven months ending Nov. 30 this year they only amounted to 93,445 tons, as compared with 177,955 tons in the corresponding eleven months of 1873, and 441,074 tons in the corresponding eleven months of 1872. We thus arrive at the remarkable fact that we only sent the Great Republic rather less than one-fourth the quantity of railway material in the first three quarters of this year, which we forwarded in the same direction in the corresponding three quarters of 1872. A result so remarkable certainly calls for such enquiries as we can make, and such comments as we can offer.

We do not think that the decline in the American consumption of British rails is wholly attributable to the growth of American metallurgical industry, as may be at first sight supposed. It is rather due to a combination of causes. No doubt the increased production of iron in the United States has had the effect of displacing a certain amount of English iron from the American markets, but this is not the only circumstance which has reduced the demand for our railway material across the Atlantic. The credit of the American railway interest has been affected by a series of adverse circumstances to such an extent that it has now sunk to a very low ebb indeed. The JAY COCKE panic of September, 1873, raised suspicions and provoked alarms, and now a vast amount of American railroad bond capital finds itself without interest. Defaults and "arrangements" have become the order of the day to such an extent that European holders of American railroad bonds are utterly weary of the deceptions and disappointments of which they have been the victims. Then the bodies known as the "grangers," in proclaiming their determination to secure a reduction in railway rates, without regard to a due remuneration of the capital engaged in American railroad enterprises, have violated the first principles of political economy; and although they will probably have to retrace their steps, and accept those principles as inevitable, they have none the less struck for a time a deadly blow at American railroad credit. Lastly, we cannot ignore, in considering the present aspect of the American iron trade, the utterly disorganised and chaotic condition of some of the Southern States. How can enterprise be sound or hopeful in such communities as Arkansas, Louisiana, South Carolina, or North Carolina? In the Carolinas obligations which must, at any rate, be regarded as *de facto* State debts are repudiated to the extent of millions of dollars; in Louisiana the "troubles" between the blacks and the whites rendered necessary the intervention of the President; and in Arkansas two rival Governors have marshalled their forces in battle array. How, we repeat, can enterprise ever thrive in presence of such fatal conditions as these?

We must not, however, despair of the Republic. There is room for prodigious reform in American society, American politics, and American finance; but still even now one must regard the United States as a great nation, possessing vast, not to say unrivalled, resources. The uses of adversity are wholesome, and if their present troubles teach the Americans a few lessons in political economy and morals (not forgetting common honesty) this now vanishing 1874 will not be a wasted year. We believe that the American railroad interest would be greatly benefited if the weaker railroad companies of the United States would make common cause with such of their neighbours as have acquired a comparatively strong credit. We shall, probably, see a good many fusions and amalgamations, and these will tend to heal the wounds of the past, and to accelerate a revival of American railway credit.

ENGLISH MACHINERY IN PRUSSIA.—The President of the Prussian Mining and Ironworks Company (Preussische Bergwerks und Hütten-Actien-Gesellschaft) stated at the recent meeting in Düsseldorf that the second pit at every colliery should, as in England, be made a *conditio sine qua non*, not only for the protection of human life by the proper ventilation of the pits and means of escape from them, and for the output of increased quantities of coal, but specially in the case under consideration, as a reserve in case of accidents to the pumps in the one shaft, to enable the evil to be remedied without stopping the coal work of the whole colliery. They had weighed this question of a reserved system of pumping in all its points, and had thoroughly convinced themselves that it is indispensable; and after considering offers, and the advantages of several different systems, finally resolved upon the adoption of a system, settled upon with Mr. Davey, the patentee (of the firm of Messrs. Hathorn, Davis, Campbell, and Davey, of the Sun Foundry, Leeds); and contracted with him for the delivery of a duplicate system of steam and hydraulic engines for their colliery Erin, for which the means for the present have been provided by the Consortium. They contemplate the adoption of similar systems for both Hansa and Zollern.

COAL IN NOVA SCOTIA.—Nova Scotia seems to have suffered heavily in her coal interests from the panic of 1873. During the first nine months of that year the trade in coal amounted to 641,057 tons, and during the same period this year it has amounted to 571,889 tons. The quantity of coal raised from the mines in the same months shows a falling off of 12,777 tons.

EXPLOSIVES—GUNCOTTON.—The Special Committee on Guncotton, of which Col. Younghusband, Royal Artillery, F.R.S., Superintendent of the Royal Gunpowder Factories, Waltham Abbey, is president, has closed its proceedings, and presented its final report to the authorities at the War Office. The Committee has thoroughly examined the qualities of guncotton, lithofracteur, and dynamite, with special regard to their utility for warlike purposes, and the general questions on which the report treats are those of manufacture, storage, and use of these several explosives. The Committee finds that guncotton is a most valuable explosive agent for military and naval purposes; that, as it is capable of being manufactured in a wet state, there is no danger attending the process; and that, as it can be stored wet, it can be safely conveyed on board ship or warehoused without risk. It is also found that guncotton, though fired by detonation, is not exploded by being struck with a bullet. In these respects guncotton is reported to have contrasted favourably with the other explosives mentioned, which, although tolerably safe to store and transport when fresh, are not so secure from danger under all circumstances.

A NEW POWDER FOR HEAVY GUNS.—It is said that the German Government has just adopted a new kind of prismatic powder for its heavy guns, which is far superior to that used in England and Russia. The powder hitherto used by the Germans was similar to the Russian, and was proved to be more effective than the English in some trials made with an English 8 in. Woolwich gun and a Russian 72 pounder on the artillery shooting ground at Tegel. The new powder consists of hexagonal prisms like the old, but the prisms are pierced with one hole only instead of seven, and the specific gravity of the powder is raised from 1.56 to

1.68. According to the *Baltic Gazette*, the results produced by this improved powder are extraordinary, and a Prussian 28 centimetre gun loaded with it is equal to an English 11-in. gun with the ordinary powder.

REPORT FROM SCOTLAND.

Dec. 23.—The speculative strength which the Warrant Market has exhibited for many weeks seems now to have spent itself, and prices are now more in harmony with the dull state of the trade. The price at the date of our last week's report was about 85s., and since then a gradual and steady decline has taken place until to-day, when 79s. was accepted, the market closing with sellers at that quotation. The prices of makers' iron again show a reduction.

G. m. b. at Glasgow (deliverable alongside)	No. 1.	No. 3.
Gartsherrie ditto	86s. 0d.	85s. 6d.
Coltness ditto	92 6	81 0
Summerlee ditto	92 6	81 0
Carnbroe ditto	90 0	81 0
Monkland ditto	86 0	81 0
Clyde ditto	86 0	81 0
Govan, at Broomielaw ditto	86 0	81 0
Langloan, at Port Dundas ditto	97 6	82 0
Calder ditto	97 6	82 0
Glenarnock, at Ardrossan ditto	91 0	82 0
Eglinton ditto	81 0	75 0
Dalmellington ditto	86 0	80 0
Carron, at Grangemouth, selected, ditto	92 6	80 0
Shotts, at Leith ditto	92 6	84 0
Kinnell, at Boness ditto	87 6	78 6
Bar iron	210 0	—
Nail rods	10 0	—

SHIPMENTS.	Tons
Week ending Dec. 20, 1873	9,156
Week ending Dec. 19, 1874	7,324

Decrease	1,832
Total decrease since Dec. 25, 1873	155,488
Imports of Middlesbrough pig-iron into Grangemouth:—	
For the week ending Dec. 20, 1873	4,354
For the week ending Dec. 19, 1874	2,390

Decrease	1,954
Total increase for 1874	46,449

Without anticipating our Annual Report of the Scotch Iron Trade, which we expect will be ready for next week's Journal, we understand the returns of the year will show a falling off in the make, the exports, and the local consumption, consequent on a restricted trade, the result of high prices. The stocks in Connal's Store are augmenting, prices are falling, and the furnaces are stationary at 121. Manufactured iron is, if anything, less required for, and makers are desirous to have their works closed for the holidays, as operations are only entailing loss upon loss.

The Coal Trade is slightly more active, with firm prices for domestic qualities, but steam coal is only in limited request. The shipments for the week amount to 31,722 tons, against 33,641 tons in the same week last year. The Fife Coal Trade is better this week, but no change in price.

A conference of miners' delegates was held here this afternoon, but nothing of importance transpired.

On Monday a circular was sent to the coal and iron masters of Scotland, signed by 15 delegates, representing the colliers and miners on this side of the Tweed. The circular earnestly calls on the masters to consider the propriety of joining them in an endeavour to establish courts or boards of conciliation and arbitration, by which all disputes might be settled, and strikes avoided forever.

NAPIER'S FRICTION METER.—"An Engineer" writes to a local contemporary—"I feel sure that the Philosophical Society of Glasgow will find no fault with the statement of the merits of the invention which the diffidence of the inventor seems to have led them to overlook. It is somewhat unfortunate that the paper read by Mr. R. D. Napier on friction in its relation to the velocities of sliding surfaces should have fallen foul of the received rules on the subject, but still more unfortunate that its having done so should have led the society away from the consideration of an invention that is of the very first importance in any discussion on the subject. Although many of the remarks made on Mr. Napier's paper turned on the practical qualities of different lubricants, the speakers quite ignored the fact that the instrument which Mr. Napier had just explained to them was the only one in existence that could definitely determine their various lubricating capacities. Hitherto many attempts have been made to produce an apparatus for this purpose, but the most that has been done is to show the amount of friction produced at considerable intervals of time, either by the retarding effect upon a falling body or by measuring the amount of heat evolved. These instruments at the best are but a very clumsy means of securing a record of the varied and subtle changes that take place during alterations in the velocity of the sliding surfaces, and certainly none of them, even in the hands of the most dexterous experimentalists, could have brought to light the results which Mr. Napier explained to the meeting, all of which were absolutely new. The fact that the coefficient of friction is always altering in sliding surfaces where lubricants are used under varying velocities must have been well known to Mr. Napier, and he must also have known that the rules for cases where the surfaces are dry, and the coefficient of friction constant, could not be applied; but why a discussion on this difference should have led the society to overlook the merits of Mr. Napier's ingenious and important invention I am at loss to discover.

At a meeting of the Chemical Section of the Philosophical Society of Glasgow, Mr. E. M. Dixon read a paper on "The Estimation of Phosphoric Acid." It was pointed out that the author of the paper had been for some time engaged upon a systematic study of this important and difficult problem in chemical analysis, and that the paper read was simply the conclusions that he had arrived at regarding certain specific parts of the question. The points requiring additional experimental research were indicated, and the author expressed the hope that he should be able to lay before the society in a short time the results of an investigation on which he was now engaged regarding them. The next paper was read by Mr. Thomas Robertson Ogilvie, public analyst, Greenock, on "The Estimation of Phosphoric Acid as Ammonia-Phosphate of Magnesia."

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

Since my last, business has continued on a limited scale, although for coal shares there is undoubtedly a pretty good demand, and prices are higher. The reports of the committees of shareholders of the Benhar and Niddrie Coal Companies have just been issued, and the most interesting portions of them will be found in my report of Tuesday's business. It will be noticed that they are both in favour of the proposed amalgamation going on, and there can be little doubt now but that it will go on; and the shares are, therefore, advancing. With reference to the distribution of profits to Benhar shareholders mentioned in the reports, I may point out that it will amount to 15s. per share on each Benhar; and, as the dividend in time amounts to 20s. per share, this makes a distribution of 35s. per share, which purchasers of Benhar at present prices are entitled to. The report of the Cairntrable Company declares a dividend of 10 per cent., but has not been issued. Copper shares (with the exception of Glasgow Caradon) have declined from the want of business. Glasgow Caradon, Gunnislake (Clitters), and Yorke Peninsula may be pointed out as certain to rise when business recovers. Americans entirely neglected. Oil shares looking down. Miscellaneous not much dealt in beyond London and Glasgow Engineering, at 22 to 23; Highland Peat Fuel offering at 2 dis.; Langdale's Manure, 3½ to 4½; and Newcastle Chemical, 4½ to 3½ dis. A detailed list of the several days' business follows:—

On Thursday last a fair business was done. Arncliffe continued hands at 6. Benhar, 14½ to 14¾. Canadian Copper Pyrites done at 42s. 6d., 42s. 9d., and 43s., closing 42s. 6d. to 43s. 6d. Ebbw Vale done at 21½ and 22, closing 21½ to 21¾. Emma done at 21s. to 22s. Glasgow Caradon shares firmer, at 31s. 6d. to 32s. Gunnislake (Clitters) flat, at 1½ to 2½. Marbella shares done at 5½, closing 5 7-16ths to 5½. Merry and Cuninghame shares rather weak, done at 69s. 6d., closing at that price. Monkland ordinary shares done at 4½, closing 85s. to 86s. Niddrie shares again good, done at 69s. and 70s., closing at these prices. Scottish Australian, 28s. 9d. to 31s. 3d. Thariss shares done at 26½ up to 26 1-16ths, closing 26 7-16ths to 26½. Yorke Peninsula ordinary shares 6s. 3d. to 6s. 6d.

On Friday the market was quiet, but the business still continued fair. Arncliffe in demand at 6 to 6½. Benhar done at 14½, closing 14½ to 14¾. Canadian Copper Pyrites lower, done at 41s. 6d., closing 41s. to 42s. Chillington Iron lower, at 5½ to 6½. Ebbw Vale done at 21½, closing weak at 21½ to 21¾. Emma again in demand, done at 23s., closing 23s. 6d. to 24s. 6d. Gunnislake (Clitters) again flat on a heavy decline in the copper standards, nominally 1½ to 2. Huntington done at 57s., closing weak at 52s. to 54s. Marbella, 5½ to 5¾. Merry and Cuninghame firmer, done at 69s. 6d., closing 69s. to 70s. Monkland, ordinary, done at 4½, closing 85s. to 86s. Niddrie hardly so good, done at 69s., closing 68s. 6d. to 69s. Scottish Australian lower at 1½ to 1¾. Thariss done at 26½ and 26 7-16ths, closing about 26½. New shares lower at 15 7-16ths to 15½. Yorke Peninsula, ordinary, also lower at ½ to ¾. London and Glasgow Engineering done at 22.

On Saturday the business done was very small, and few changes took place in prices. Arncliffe good at 6½ to 6¾. Benhar done at 14½. Canadian Copper Pyrites done at 41s. 6d. and 42s., closing 42s. to 42s. 6d. Chillington Iron lower, at 5½ to 6½. Ebbw lower, and flat at 21 to 21½. Glasgow Caradon unchanged at 31s. 6d.; the monthly sale of ore by this company is announced, being 245 tons, realising 178d. ctd., or an average of 112s. 7d. per ton; at this time last year 260 tons only realised 122d. ctd., or an average of 94s. 7d. per ton, thus showing a difference of 18s. per ton in favour of this year. The price of the shares was then about 42s.; now they are about 52s., thus leaving a good margin for a rise.

Gunnislake (Clitters) again lower at 1½ to 1¾. Merry and Cuninghame done at 69s. 6d. and 70s., closing about the latter price. Monkland, ordinary, done at 4½, closing 85s. to 86s. Niddrie done at 68s. 6d., closing 68s. to 69s. 6d. Thariss done at 24½, closing about 26½. London and Glasgow Engineering done at 22, closing 22 to 23.

On Monday rather more business was done, and prices were slightly firmer. Arncliffe shares done at 6½, closing 6½ to 6¾. Benhar shares done at 14½, closing 14½ to 14¾. Bolckow, Vaughan A shares done at 55. Canadian Copper Pyrites shares done at 42s. 6d., closing 42s. to 43s. Ebbw shares done at 21½, closing 21½ to 21¾, but firmer at the reduction. Glasgow Caradon shares were transacted at 32s., and closing 31s. 6d. to 32s. 6d. Gunnislake (Clitters) shares still 1½ to 1¾, but firmer. Huntington shares done at 54s. 6d. and 54s., closing 52s. 6d. to 54s. 6d. Marbella shares done at 5½. Merry and Cuninghame shares done at 3½, closing 69s. 6d. to 70s. 6d. Monkland ordinary shares, 85s. to 86s. Niddrie shares done at 68s. 6d., closing 68s. to 69s. Thariss shares done from 26½ up to 26½, but close weaker at 26½ to 26¾. London and Glasgow Engineering shares unchanged at 22 to 23.

On Tuesday the business was again fair, market firm, and prices generally higher. Arncliffe shares done at 6½, closing 6½ to 6¾. Benhar shares done at 14½, closing 14½ to 14¾. Canadian Copper Pyrites shares, 41s. to 42s. Colorado Terrible shares unchanged at 3½ to 3¾; the monthly circular to shareholders of this company is dated Dec. 19, and is favourable. The directors expect by the end of this month to realise from sales sufficient to enable them to pay a dividend in January. The last report from the mine states that the working never looked better. Sales of shipments 45 to 56 have taken place in Liverpool, 57 to 60 are being prepared for sale, and 61 to 63 have been dispatched by the agent. The agent also expects to ship ore worth \$12,000 during the winter, leaving \$7000 profit. The monthly statement for September showed a balance of profit of about \$4300. The yield of ore of all classes for October was 477 tons 566 lbs. Ebbw done at 21½, closing 21½ to 21¾. Glasgow Caradon done at 32s., closing 32s. to 33s. Gunnislake (Clitters) unchanged, at 1½ to 1¾. Huntington done at 54s., closing 53s. to 54s. Marbella, 5½ to 5¾. Merry and Cuninghame done at 3½, closing 69s. 6d. to 70s. Monkland ordinary, 85s. to 86s. Niddrie done from 68s. 6d. to 70s., closing good at 70s. to 71s. Nant-y-Glo and Blaena preferred, improved to 42 to 46. Scottish Australian remain at 28s. 9d. to 31s. 3d. Shott's Iron, new shares, 5½ to 6. Thariss done from 26½ up to 26½, closing weak again at 26½ to 26¾. Young's Paraffin lower, at 5 to 5½. Yorke Peninsula ordinary, ¼ to ¾. Highland Peat Fuel shares offered at 7.

Reports relating to the proposed amalgamation of the Benhar and Niddrie Coal Companies have just been issued. The meetings of the companies to consider the reports are to be held on the 31st inst. It may be explained that these meetings are called in accordance with the Companies Acts, 1862, for the purpose of considering, and, if approved, to confirm, the resolutions passed at the extraordinary general meetings of each of the companies held on the 5th inst. for effecting the amalgamation. The reports by the directors of the two companies are very similar, the following is extracted from them:—The directors were pleased with the very large support received from the shareholders at the meetings on 5th inst.; they are also pleased that two committees acting separately and representing different interests should arrive at results so similar to the recommendations of the directors; that is to say, that the proposed amalgamation is expedient, and will be beneficial to both undertakings. Some enquiry has been made as to the date from which the amalgamation should take effect; the directors recommend July 1, 1874, consequently the undivided profits of the Benhar Company earned prior to that date will belong to the shareholders of that company exclusively. The directors did not leave the amount of these profits to be determined by the auditor of the united company, but with the aid of the committees ascertained 15,000, to be the amount as near as possible to be fixed.

With regard to the reports by the committees of shareholders of the different companies, they are particularly full of information on every point, but owing to their great length it will be impossible for me to give more than a few extracts from each of them at present. The following are from the Benhar shareholders' committee:—The enquiry just completed by the committee has necessarily involved a considerable expenditure of time and labour, and in view of the strong feeling of dissatisfaction manifested by some of the shareholders at the extraordinary general meeting held on the 5th inst., and also having regard to the fact that the Niddrie property had so recently changed hands at a price very far below that at which it was taken over by the Niddrie Company, they have felt it their duty to make the investigation as thorough and searching as possible. They have been most anxious to obtain reliable information from any quarter, and especially so because the experience of mining engineers and others in the working of seams of coal at a very high angle is comparatively limited. Although they had not the slightest doubt regarding the ability or integrity of the mining engineers who had reported on the Niddrie coal field at the request of the directors, the committee nevertheless thought it desirable to call in the aid of a professional man wholly unconnected with the district, and they have reason to believe themselves fortunate in having secured the services of Mr. J. B. Simpson, mining engineer, of Blaydon-on-Tyne, who has thoroughly inspected the Niddrie property, and reported to the committee thereon. They also invited and received suggestions from several shareholders who were opposed to the scheme of amalgamation at the recent meeting, upon subjects for enquiry which it might be supposed would escape the attention of the committee.

On the 10th inst. the committee made a personal inspection of the Niddrie property. They then proceeded to take the evidence of Mr. John Geddes, mining engineer, Mr. William M. E., Mr. George Simpson, and Mr. Drummond, directors of the company, with special reference to the amount of outlay required to develop the Niddrie coalfield, the cost of working, the estimated output, and the prices expected to be obtained for coal and ironstone. With reference to the quality of the coal in the Niddrie field, the committee had the advantage of hearing Mr. J. K. Watson, manager of the Edinburgh Gas Company, and Mr. Reid, manager of the Edinburgh and Leith Gas Company, who both spoke in high terms of the No. 1 seam as being a first-class gas coal, and ranking in value very little under that of the best Lesmahagow coal. They also spoke to Mr. Geddes, who has gone over the working plans of the Benhar property along with Mr. Williamson, mining engineer, who is well acquainted with the coal fields, and they have ascertained that the quantity of No. 1 seam of household coal is sufficient to last, at the present rate of output, longer than the term of the leases. The same gentlemen have also gone over the plans of the Niddrie coal field, and have personally inspected the various seams, have found that their thickness, as stated in the prospectus, is substantially correct, and that the quantity of coal available for working is equal to an output of at least 30,000 tons of coal and 120,000 tons of common coal per annum during the currency of the leases.

On the 17th and 18th inst. Mr. J. B. Simpson visited the Niddrie property, accompanied by his assistant, and made a thorough examination of the collieries, both above and below ground. At the request of the committee his inspection was made without any communication with the directors or principal officers of either company, and on the 19th inst. he reported the result to the committee. He formed a favourable opinion of the Niddrie property, and stated that, notwithstanding the high angle at which the coal lay, the cost of working would not be greater than that of flat seams, because the excellence of the roofs would admit of a less quantity of timber being used, and the saving in that item would to some extent make up for other disadvantages. His estimate of the value of the Niddrie property was higher than the price paid for it by the Niddrie Company to Mr. George Simpson. On a careful review of the evidence submitted to them, the committee are of opinion that the Benhar and Niddrie Companies may be amalgamated with advantage to both. The great feature of the former is the No. 1 household coal, justly held in high esteem over a large portion of Scotland, which, by the late sale, has been secured to the company, and the resources of the latter, which, as well as a fine seam of blackband ironstone, which can be raised along with the coal at a comparatively small cost, and has a ready sale at good prices. Then again, the easy rate of carriage to the ports of Leith and Granton will enable a large export trade in both coal and common coal to be carried on to great advantage, and the proximity to Edinburgh commands a ready sale for many purposes. And the following are from the Niddrie shareholders' committee:—

The terms of their appointment appeared to the committee to require them to examine the affairs of both the companies concerned in the proposed amalgamation, and as far as their means and the time at their disposal would permit they have done this. They have inspected the books of both undertakings, obtained explanations, oral or written, from Mr. Simpson, Mr. Drummond, the secretary; Mr. John Geddes and Mr. John Williamson, mining engineers. Both coal fields have been visited, and the committee have had the advantage of the special knowledge of two of their number. Mr. Thornton, himself a coalmaster, has long been acquainted with the Benhar field, a section of which, indeed, he formerly owned and worked, and he is now lessee, and works a portion of the Lesmahagow coal field. Mr. McKelvie has been extensively engaged in the sale of gas coal for upwards of 25 years. The committee are glad to be able to report their belief that the apprehensions which have been expressed by outside parties of the scarcity and approaching exhaustion of the minerals in both fields are wholly unfounded. They have no reason to doubt the substantial accuracy of the estimates of the quantity of minerals in the Benhar fields at the date of the incorporation of the company, and since then new leases of extensive areas have been entered into, which have added materially to the resources of the company. At the present time the total superficial area under the control of the Benhar Company is upwards of 14 square miles, 4000 acres of which are, however, to a certain extent unproved. From geological hypotheses, minerals exist over nearly the whole area, but their extent and condition in certain places are still doubtful, pending the boring and other similar operations now in progress.

In regard to the Niddrie, reports have, the committee learn, been circulated that part of the field is already nearly exhausted of coal, and that endeavours to secure what remained had in former times been frustrated by an uncontrollable influx of water. To this the committee naturally directed their attention, and the information they have received, and the personal examination of Mr. Thornton, dispose satisfactorily of both allegations. Without entering into lengthened details a few words of explanation may be useful on this topic. With respect to the alleged exhaustion, Mr. Geddes is entitled to speak with some authority. He has known the fields in question for many years, and has long acted professionally for their proprietors. From this gentleman and from Mr. Williamson, who is also familiar with the East Lothian coal fields, the committee derive the following explanations:—

Slight acquaintance with the district will show that the surface of the ground rises gradually from the sea shore near Portobello towards the south in the direction of Penicuik. The well known "edge" seams of coal, which are those of the company, crop out in a line nearly due north and south. From the shore at Portobello an old drainage level penetrates the coal field, and furnishes the means of withdrawing the water from that of the strata as lie above it. By the aid of this system of drainage much of the coal lying near the surface was, in all probability, worked out at a very early period. This "day or sea level," as it is now called, necessarily varies in depth as the surface of the ground rises or falls. At the Glen Pit, near the northernmost limit of the field, it is 11½ ft. beneath the surface. At Niddrie, where pits are sunk to the Starhead and Great seams, it is 22 ft. deep. It is deeper further southwards, and shallower further northwards. It has been stated to the committee that although the common coal has been worked out of which this "day or sea level," and the surface, much parrot coal, the value of which was not formerly understood, remains. The estimates of the prospectus were, however, based upon the assumption that the whole of such coal was exhausted, and account was only taken of those lying below the level in question. The workings beneath this level have been, so far as the committee have ascertained, carried on only in recent times. Their extent and the quantity of coals withdrawn by them should not, in professional hands, be difficult to compute. The engineer's estimate on this point are before the public. The whole difficulty and uncertainty of mining enterprise consists in the impossibility of determining with absolute certainty the existence of that which is hidden from view, and the committee cannot say more in the present instance than that, in their opinion, res-

reasonable caution has been observed in framing the prospectus estimates of quantities, and that no reason had been presented to them to lead them to suppose they are erroneous or exaggerated.

With regard to the water, the committee are informed, and find on inspection, that no practical difficulty from this source is experienced, although a pit in one of the seams has been sunk to a depth of about 90 fms. Provision, however, appears to have been made in the machinery now on the ground for dealing with any extraordinary influx which may, contrary to expectation, be encountered. The committee are further informed that the water which formerly caused much trouble and expense, and which was probably the origin of the report adverted to, was met with in seams dissimilar in character from those of the Niddrie Company, and not in any way connected with them. Moreover, that the Niddrie Company's leases contain express prohibitions against any underground communications whatever with them. Though having similar objects, the leading features of the two companies differ. The merit of the Benhar lies in its possession of a large field of highly popular house coal, found at moderate depth and cheaply worked. The specialty of the Niddrie consists of a field of gas coal, rare as to its extent and facility of production. Among what may be described as subsidiary advantages, the Benhar Company have an important share of the steam coal field of Scotland, while the Niddrie Company's household and steam coal of fair average quality exists in great abundance in close proximity to the shipping ports of Leith and Granton, and to the Edinburgh market.

In estimating the relative merits of the two undertakings, it is right to bear in mind, on the part of the Benhar, that it possesses an organised agency establishment in full operation, that its capital is £40,000, as compared with £10,000 of the Niddrie Company, and that it has acquired a commercial status to which the Niddrie has as yet no pretensions. On the other hand, regard should be had to the extent and general features of the Niddrie field, containing as it does, within a small compass, besides gas coal, numerous seams of house and steam coal of great aggregate thickness; to the growing scarcity of, and increasing demand for, gas coal of good quality; to the much larger profits ordinarily realised from high-class parrot than from common coal; and, finally, that if placed on a solid foundation, the company can hardly fail ere long to assert its position in the commercial world. Giving due weight to these considerations, the committee are unanimously of opinion that, as a mineral subject, the Niddrie is more valuable than the Benhar—that its dividend-earning capacity is at present as least as good, and by an adjustment of its financial arrangements upon a principle already adopted in the Benhar capital accounts, the prospects of the ordinary shareholders will be decidedly superior. Entertaining these views, the committee are, nevertheless, not insensible to the benefits which may accompany or follow amalgamation. The vast economy of management, the common use of rolling stock, greater financial solidity, higher prices arising from the limitation of competition, have been suggested. Niddrie shareholders may regard these as an equivalent for what they may otherwise concede. Subjoined will be found the latest prices:—

COAL, IRON, STEEL.			
Amount	Amount	Name.	Latest
share.	paid up.		price.
£10	6	Arnstall Coal (Limited)	6½
10	10	Benhar Coal (Limited)	14½
100	30	Belkora, Vaughan, and Co. (Limited) ..	5½
10	5	Calratable Gas Coal (Limited)	5½
10	10	Chillington Iron (Limited)	6
10	10	Ebbw Vale Steel, Iron, and Coal (Limited) ..	21½
10	3	Fife Coal (Limited)	5½
10	10	Glasgow Port Washington Iron and Coal (Limited) ..	7½
10	10	Ditto All paid	6½
10	10	Lochore and Caplethrae (Limited)	7½
10	10	Marbella Iron Ore (Limited)	6½
10	10	Merry and Cunningham (Limited)	3½
10	10	Ditto All paid	10
10	10	Monkland Iron and Coal (Limited)	4½
10	10	Ditto 7 per cent. Guaranteed Preference ..	8½
100	100	Nant-y-Glo and Blaenau Ironworks pref. (Limited) ..	4½
10	2	Niddrie Coal (Limited)	3½
10	4	Onna and Cleland Iron and Coal (Limited) ..	48s.
1	1	Scottish Australian Mining (Limited)	1½
1	50	Ditto New	78½
10	4	Shotts Iron	6
10	4	Ditto New, issued at 2½ premium	6
COPPER, LEAD, SULPHUR, TIN.			
10	7	Canadian Copper Pyrites (Limited)	42s.
10	10	Ditto All paid	6½
10	7	Cape Copper (Limited)	30½
1	1	Cwm Hychan Silver Lead (Limited)	3½
1	1	Cwm Lery Lead (Limited)	3½
1	5	Drake Walls	4½
2	2	Dunsley Wheel Phoenix Tin (Limited)	3½
1	1	Glasgow Caradon Copper Mining (Limited)	32s.
1	150	Ditto New	1
1	5½	Gunnislake (Clitters)	1½
10	9	Huntington Copper and Sulphur (Limited) ..	54s.
1	1	Lelay Lead (Limited)	3½
250	230	Kapunda Copper (Limited)	1
10	4	Pauellito Copper Mining (Limited)	1
10	4	Rio Tinto (Limited)	8
10	10	Russian Copper Mining (Limited)	2½
10	6	South Roskear	4½
10	10	Tharisa Copper and Sulphur (Limited) ..	26½
10	7	Ditto New	18½
1	80s.	West Maria and Fortescue	3½
1	1	Yorke Peninsula Mining (Limited)	4½
1	50	Ditto 15 per cent. Guaranteed Preference ..	3½
GOLD, SILVER.			
5	5	Colorado Terrible Mining (Limited)	3½
20	20	Emma Silver Mining (Limited)	1½
10	10	Flagstaff Silver Mining (Limited)	3
2	2	Javali Gold Mine (Limited)	3½
5	5	Last Chance Silver Mining (Limited)	1
OIL.			
10	7	Dalmeny Oil (Limited)	5½
5	5	Midlothian Mineral Oil (Limited)	3
10	8	Uphall Mineral Oil (Limited)	5
10	10	West Calder Oil (Limited)	7½
10	8½	Young's Paraffin Light and Mineral Oil (Limited) ..	5½
MISCELLANEOUS.			
10	10	Conglog Slate and Slab (Limited)	10½
10	9	Highland Peat Fuel (Limited)	7
60	25	London & Glasgow Engineering & Iron Shipbuilding ..	2
1	1	North Cornwall Kaolin (Limited)	1½
20	7½	Peruvian Nitrate (Limited)	5
10	10	Scottish Wagon Company (Limited)	12 1-16
10	1	Ditto New	22s.

Last day for this account Dec. 24; settling day, Dec. 30.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them, such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Dec. 23.

REPORT FROM MONMOUTH AND SOUTH WALES.

Dec. 24.—As the festive season is now so near at hand it is scarcely a time when things should be looked at in a gloomy manner, and for a while, at least, we will allow the future to take care of itself; nevertheless, it cannot be concealed that the commencement of the new year is anticipated with feelings of anxiety, and the question on nearly everyone's lips appears to be—"Will the reduction in wages be carried out?" Although vague rumours to the contrary have been industriously promulgated it is to be feared that it will; some of the coalowners, however, may not enforce the reduction immediately. Influences have been at work among the men endeavouring to show them that the masters do not really seek to enforce the reduction to meet requirements of the trade, but as a means to destroy the Union, and consider this a favourable opportunity for putting their scheme into operation. This charge cannot at least be laid to the ironmasters, for without a doubt the exigencies of their trade do require the wages rate to be as low as it possibly can, and by reducing the wages of the colliers the cost of fuel may be diminished. It is only in regard to the steam coal trade that such an argument can be admitted, if admitted at all, for in this branch of the trade the demand and prices have not varied to any material extent for some time past; still the masters are, no doubt, aiming at assimilation.

There has been but little business done in the iron market during the last week, and probably not many, if any, of the new contracts will be entered into for the next week or two, as much of the time will be taken up in stock-taking. The Ebbw Vale Steel, Iron, and Coal Company have lately booked some appreciable orders for steel rails on account of Canada. The tin-plate trade shows a downward tendency again, and makers seem disposed to resort to a reduction in wages.

Coals, as already stated, are in fair demand, and up to the present the pits have been in full work. Christmas will, however, be duly observed by the colliers as in previous years, and from Thursday to Monday it is not likely that much work will be done. A series of accidents occurred at the Dowlais Collieries within the last week or two, which has thrown a large number of colliers out of employ, and caused the output to be considerably smaller.

About 500 men have also been thrown out of work at the Black Vein pit at Abercarn, Monmouth, in consequence of the means of ventilation having been condemned by Mr. L. Brough, the Government Inspector of Mines for the district. Mr. Brough ordered a fan to be used instead of furnaces. A deputation of men waited on the Inspector to ask him to allow them to go on working with the usual

ventilation while the fan was being constructed, but their request was not complied with.

The dividend of the Messrs. Richards and Company (Limited) is at the rate of 10 per cent. The company owns extensive collieries, and in addition carry on one of the largest businesses as merchants in the kingdom, their sales amounting to something like 30,000 tons per month. The first meeting of the company passed off in a satisfactory manner.

An interim dividend at the rate of 10s. per share has been declared by the Ebbw Vale Steel, Iron, and Coal Company (Limited). This is the same rate for the corresponding period of last year. The shares have 20s. each paid.

REPORT FROM CORNWALL.

Dec. 23.—But for the fact that Dolcoath meeting has been held this week, Christmas would have had to pass over almost without any report at all. The market is inspirited and cheerful for tin stock, and not too seriously depressed by the late fall in the standard so far as regards copper stock. But that is all the news there is to note. We still want the good time coming.

Dolcoath meeting shows more forcibly than ever what the resources of this extraordinary mine are. Without any undue shirking of deadwork; with a development in the bottom as rapid as if everything was *coulour de rose*; with an average of tinstuff worth, in the stone only, 25s. per ton—Dolcoath has not only kept up but increased its dividend to 12s. 6d. per share. There is the deepest mine in the county, the most expensive mine in the county, a mine that has been worked for centuries—still with a large area of undeveloped ground; still rich and promising, as if it were in its first vigorous youth, instead of having reached mature age. There could hardly, we fancy, be found a better type of the county itself. Cornwall has been a metal-producing district for thousands of years; as the centuries have rolled on, so operations have become more expensive; again and again has the area been assailed by depression and vicissitude; but here she is, still able to weather the storm, still yielding her treasures to those who know how to seek them, still bearing within her rocky crust stores of riches, to which what has been yet realised bears but a very small proportion. Let no one imagine, then, that the part of Cornwall in the metalliferous history of the world is played out. She has to adapt herself to circumstances, and the adaptation must be attended with some trouble and some loss; but given adequate energy, sufficient skill, and fair play, we do not despair but that for hundreds of years still Cornwall will continue to be one of the most important facts in estimating the metallic products of the world. It is a good omen for 1875 that 1874 should close with so satisfactory a meeting as that of Dolcoath last Monday—the particulars of which appear in another column.

Capt. Francis Oates, of Botallack Mine, St. Just, Cornwall, who a few years since obtained the gold medal of the Science and Art Department, and who has otherwise distinguished himself in science, has been appointed by the Crown Agents for the Colonies as Superintending Mining Engineer for the African Diamond Fields. This appointment of a thoroughly practical miner, and a well-educated man of science, to this important office is much to be commended.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 23.—The aspect of the Iron Trade in South Staffordshire has undergone little change since our report of last week either in the pig or finished department. There has been an increase of activity at the mills and forges during the past nine days, due to the anxiety to clear off as many outstanding orders as possible before the commencement of the holidays, and leading firms report that they are carrying forward a fair balance of specifications for sheets and some other classes of iron into the new quarter. Nothing has yet been decided as to the course of prices, but an impression widely prevails that a reduction will be declared both in the price of best coal and in the standard for marked iron. Pending this decision buyers have for some little time past been withholding all but the more urgent orders. The selling quotations of the week include 9s. 5s. for common bars, and 12s. 10s. for common sheets (singles). Marked bars remain 10s. 10s. to 11s., according to brand, with the usual special extra for Earl Dudley's "round oak" make.

The South Staffordshire Coal Trade has been stimulated this week by the increased severity of the weather, which has caused a good demand to prevail for house fuel. Prices are also stronger, although there is no quotable alteration. Owing to the frozen state of the canals great difficulty is experienced in obtaining transit for the coals being raised, especially in the Cannock Chase district, where the railway facilities are not adequate to the requirements. Common coal for forge purposes is selling in South Staffordshire at 10s. per ton. There is no change in the price of best coal, but a reduction of 2s. per ton on Quarter-day is generally looked for.

This day's quotations on the Birmingham Stock Exchange include the following:—Sandwell Park Colliery (10s. paid), 38; Cannock and Huntington Colliery, 4 dis.; Chillington Iron, 64; Ivy House and Northwood Colliery, 4 dis.; Patent Shaft and Axle (Limited), 5½ prem.; Staffordshire Wheel and Axle, 2½ prem.; Pelsall Coal and Iron, 2½ dis.; Patent Nut and Bolt (Limited), 5½ prem.; Oldbury Carriage, 5½; Gloucester Wagon, 15½; and Birmingham Wagon, 18½.

The ironworks in North Staffordshire, with the exception of a few of the plate-mills, have been in active operation during the last few days, owing to the anxiety of manufacturers to clear off as many orders as possible before the commencement of the holidays. Crown bars are selling at 9s. 10s. to 9s. 15s. per ton, but for the better classes of iron prices are irregular, and a good deal of underselling is going on. House coal is in steadier demand, and there is an increased consumption of fuel at the pottery works in the district, which compensates somewhat for the decrease in demand for forge purposes.

Mr. H. J. Harding (Birmingham) has called public attention to certain infractions of the law on the subject of testing chains and cables in the South Staffordshire district:—

"My attention has been directed by some of the members of the Chamber to an infraction of the Chain-Cable Act, 1871, by manufacturers in this district. Chain cables have been manufactured and sold by a private machine, and exported to various parts of the world, without having undergone the rigid test prescribed by the Act, and carried out under the supervision of the Board of Trade, at the two establishments in the district—Nethererton and Tipton. The difference in the price is 4s. per ton less when sold without the Government test mark. Will you permit me to direct the attention of the commercial public to the following extract from clause 7 of the law, which states, *inter alia*, every person selling, or contracting to sell, any chain-cable whatever, or any anchor exceeding in weight 168 lbs. not previously tested and duly stamped, according to the provisions of the Act, renders himself liable to a penalty of 50s. Clause 10 enacts that if any person uses a private testing machine, for which no licence is for the time being in force, he renders himself liable to a penalty not exceeding 100s. Considering that the safety of human life when on board ship, and the vessel itself, depends mainly in a time of danger upon the good quality of the chain cables and anchors, it is of the highest importance that the law should be complied with."

MASTERS AND SERVANTS ACT—PAYMENT OF MINERS AT PLAY.

An important case, arising out of and upsetting Mr. Rupert Kettle's recent award, was heard at the Hinchley Petty Sessions a few days since, the counsel for the defence remarking that the award would not bear a strict examination, and that the writer appeared to him to have made a mischievous error, and to have propounded bad law besides; whilst the representative of the complainant caused much laughter by admitting that he did not place much reliance upon the award, although he mentioned it. It was urged for the complainant (Mr. Wm. Petcher, a miner), who claimed 30s. for loss of wages, that on Aug. 1 he went to his work at the usual time, having had no intimation whatever that work would not be found him in the pit. On arriving at the colliery, however, he was told that there would be no work that day. Complainant accordingly returned home. Some excuse was made as to there being no work, trade being in such a state as not to justify the colliery being worked, and there was something said as to there being no trucks at hand. Complainant worked on the following Monday, Tuesday, and Wednesday; but on Thursday, Friday, and Saturday he did not work. When the complainant went to his work on the Thursday morning, he was told that there would be no work until the following Monday. Up to that time he had lost four days' wages, which he would have earned if he had been permitted to work. The complainant was a stallman, and was paid so much per ton for the coal he got by his own cart. His average earnings were 6s. per day. He again presented himself on the Monday morning, but the masters refused, for some reason or other, to allow him to commence, and he went home again.

It was contended that where the men were employed on piecework, and had to give notice, an inference must be drawn that it was incumbent upon the master to

find the man work, and give him an opportunity of earning his wages. There seemed to be a mutuality between masters and men, because the contract was a mutual one.—The complainant did not know whether he would have been summoned if he had stopped away on his own account. He worked at Nailstone long before Mr. Millership came. He did not know how many days he had stopped away from the pit from December, 1873, to June, 1874. He was sure he had not stopped away 27 days in six months. He would not swear that he did not. He had never been summoned for playing. He did not know whether or not the pit had stood 33 days between August, 1873, and August, 1874, for want of trade. It was stopped some days. He did not know that any of the men had ever put in a claim against their masters. The pit might have stopped because of damage to the machinery, and want of work, but he had never been told why there was a holiday at the pit. When he went on Aug. 11 Mr. Bridgett told him that he could not start, because he had not packed and lumbered. It was not dangerous or unsafe to draw coals without timbering and packing being first done.

The facts were readily admitted by both plaintiff and defendant, but it was urged that the matter was of considerable importance, not on account of the claim, nor even on account of the references to a dispute between the men and their employers, but it assumed an immense importance, because it was attempted now to upset and overthrow a usage which had lasted as long as mines had been worked, he believed. He did not know how that matter had got into the heads of the men, whether it was in consequence of reports which they might have read, or in consequence of letters which might have been written by gentlemen who supposed they administered the law, but did not; but, as far as he knew, this was the first time that that very important question had arisen. The question was whether or not they could, where there was a contract between a master and servant, engrain into that contract the custom of a particular trade to which the contract applied. If they could, as he submitted they could, then they would have to enquire whether there was such a custom, and if they found there was the contract would be with the addition of the custom. The Court of Exchequer ruled in *Metzner v. Bolton* that general usages or customs were to be considered in the making of all contracts relating to business, and that they must be observed unless the terms of such contracts expressly implied that they must be excluded. The contract in the present case was with the addition of the custom. The servant was to work for the master at all reasonable times, and the master was to pay the man in return for his labour. In this case custom was established, and the man did not deny it—that they were not to be paid during the time they were prevented from working by reason of accidents to machinery or by want of trade. Why, one of the principal reasons why colliers got such wages was that there was an uncertainty and doubt as to the work, about which men and masters knew. The men had never thought of bringing such an action before; and Mr. Mottram, who represented the defendant, contended that the complainant had no ground to stand upon.

In the course of his examination the defendant (Mr. Millership) stated that on Aug. 1 he gave directions that the pit should not be worked on that day, because they were short of trucks. On Aug. 3 work was resumed, the trucks having come in, and continued on the 4th and 5th. On the evening of the 5th he received a report from the engineer on the state of the machinery, and in consequence of that he ordered the works to be stopped. He examined the machinery, and found a crank loose on the shaft, and the brake of the winding-engines broken. He had been connected with collieries for the last 30 years. He formed an opinion as to the length of time to repair the damage, and found it would take three days. He telegraphed to the makers of the engines to repair them at once, and they came. The work was proceeded with at once, and continued with all haste. The damage was repaired, and the work recommenced on the following Monday. The men were not working on the 6th, 7th, and 8th, in consequence of damage to the machinery. Notice was given of the breakage of the machinery as soon as discovered. He said the custom in all collieries was that the men were not paid for the days on which they did not work in consequence of breakage of machinery. There was also a custom that when the pit was stopped for want of work the men should not be paid. All these customs had been practised at the colliery, and adopted by the complainant. This has been the case at the colliery for seven years, and for 20 years, to his knowledge, at other collieries. The Nailstone Colliery, during the time he had been manager, had played 97 days, including holidays and feasts. When the colliery had been stopped the men had never been paid.

The defendant's evidence was confirmed by Messrs. Dugdale, joint owner of Badesley Colliery; Thomas Gray, M.E.; George Cheekland, of Mapperley Colliery; Henry Johnson, of Sandwell Park Colliery; and John Heaton, of Sheffield, the latter stating that that he was called to see the engine at the Nailstone Colliery on the evening of Aug. 5, and found it in a disabled state. The time occupied in repairing the engine was not excessive. William Bridgett, underwriter at the colliery, said he prevented the complainant working on Aug. 11, because the workings of the stall were not made safe. The complainant and his "butty," or fellow-stallman, ought to have timbered and packed them the night before. The Bench unanimously dismissed the case, and in consequence two other cases of a similar nature were withdrawn.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Dec. 23.—During the last two or three days the ironworkers and miners have been working hard preparatory to the Christmas holidays, for in many instances but little more will be done during 1874. The iron trade of Derbyshire has been very fair indeed, and there have been but very few complaints for some time past as to men being short of work. So far as regards the blast-furnaces, they have been working with great regularity for a considerable time past, and as a revival of trade is looked forward to in the early part of the year, there is little doubt that even the present satisfactory state of things will not only continue but even improve. The leading foundries have been going on very well, the output of pipes and other castings having been large. At Dronfield the Bessemer Works have given notice to the men of a reduction in wages. This was no more what might have been expected after what has taken place at similar establishments at Sheffield, and a short distance from that town. The demand for house coal has been very brisk of late, more especially for the London market; and, taking advantage of the unusually severe state of the weather, the merchants have considerably advanced their prices to consumers, to an extent indeed beyond what is warranted by the price paid at the pits. The black shale is now much higher than it has been since the commencement of the year, although supplies must be far more plentiful than they were at that time, owing to the many new collieries that have since opened out to the coal. The leading centres, such as Clay Cross and Langley Mill, have maintained their position, whilst the Midland Company, by its superior arrangements with respect to the mineral traffic, shows to the greatest advantage amongst the railway companies having termini in London, and connected directly with our inland coal fields.

The Sheffield trades during the last week or ten days have been less active than for some years previously at the same period of the year, and the "bulling" has been very moderate indeed. It has been usual for a week before Christmas for the men to work almost night and day, so as to clear work off, and to have an uninterrupted week for holidays, hence the term "bulling." Some branches have been unusually quiet, whilst the notice recently given to men engaged at the Bessemer establishments of a reduction of wages, and the discharge of others, shows that the trade is far from what it ought to be. The malleable works have been doing very well; and looking at the year all but ended, no doubt the business done has been satisfactory. We may say with regard to the Kelsham Works of Messrs. Crowley and Co. that the firm has enhanced its reputation, if such is possible, by the new specialities introduced in the shape of a patent lawn-mower, and also of a patent chaff-cutter, which practical men consider the most perfect yet brought under public notice, and by which all danger of accident to the person feeding is rendered impossible.

The Coal Trade of South Yorkshire is in a very satisfactory state at the present time, so far as the demand is concerned, but, unfortunately, being in a great measure dependent on the Manchester and Sheffield Railway, the locomotive power of that company has been found unequal to the traffic, so that at times there is a complete block on the line; the consequence is that the trade at times is so paralysed that for want of wagons, and the non-removal of the full ones, the colliers have at times to play a day or two at a time.

THE MANCHESTER GEOLOGICAL SOCIETY.

The monthly meeting of this society was held on Tuesday, at the rooms of the Literary and Philosophical Society, George-street,—Mr. John Knowles presided.

FISH REMAINS FROM THE LOWER COAL MEASURES.

Mr. J. Aitken read some notes which he had prepared on fish remains from the lower coal measures of the neighbourhood of Burnley. The specimens consisted of the following:—1 and 2. Specimens of a new and undescribed species of ganoid fish of the genus *pygopetris*, found in the Arley Mine, near Holmes Chapel, Burnley. These were in a fine state of preservation, and exhibited the sculpturing on the head, tail, fins, and scales with much distinctness.—3. A tooth of *rhizodus Hibberti* (Agg.), from the blackband ironstone of the carboniferous limestone series, at Denhead, Fife.—4. A palatal tooth (*Pephodius magnus*) from the Arley Mine, Burnley—very rare from the coal measures.—5 and 6. Fine examples of *petalodus*, obtained from the upper foot coal, Oldham, by Mr. James Dearden, believed to be the only specimen of this genus discovered in the coal measures.—7 and 8. Teeth from the coal field of Oldham—the former doubtfully referred to the genus *Helodus*.—9 and 10. Two palatal teeth from the same locality, and probably belonging to the genus *Helodus*, although characterised by a shape unusual in teeth of this

character. A brief discussion took place, and the thanks of the meeting were given to Mr. Aitken.

A paper, by Mr. James Spencer, "On the Geology of the Millstone Grits of the Parish of Halifax," was read, in the absence of the author, by Mr. Plant, one of the honorary secretaries.

A discussion followed, and a vote of thanks was passed to Mr. Spencer, the value of whose labour in his own locality was testified to by Mr. Aitken.

CRENVER AND WHEEL ABRAHAM UNITED MINES.

For several weeks the improving prospects of the Crenver and Wheel Abraham Mines have caused much greater interest to be taken in them than for some time past, and the carrying out of the proposition now under consideration for raising an additional 20,000l. of working capital will, it is confidently believed, permanently relieve the concern from all financial difficulties, and secure it a good position amongst dividend-paying mines. At the meeting, on Dec. 10, the shareholders wisely gave the directors to understand that if it could be shown that the mines are on the eve of balancing costs and receipts with a prospect of coming at an early period on the permanent list, then they would do their part towards assisting to raise the funds now considered necessary and sufficient for that purpose. As the best and easiest way of showing the shareholders what are the prospects of the undertaking for the future, the Chairman has prepared a careful statement, in which he recommends the shareholders to look back to the past, and see how far the metals lately raised from the mines would have been able to meet costs, had it not been for expenses which may be legitimately and fairly charged to development and extraordinary expenditure, or, in other words, capital account. The last bi-monthly expenditure was 4566l. 11s. 6d., and the value of ore raised was 3511l. 15s. 6d., leaving a deficit for the two months of 1054l. 16s.; but the agents believe that they will not only be able to maintain the present rate of output, but also to increase the receipts in the future both for copper and tin; but more particularly everything indicates a large increase of the tonnage of copper ore, and this may reasonably be inferred from the vast extent of ground laid open during the last 10 months, in which time they have sunk, risen, and driven more than 672 fathoms, a great part of which is through ground producing both tin and copper in paying quantities.

Probably no mine in the county has a better plant; it has cost, including engines, &c., about 40,000l. They have a 90-in., an 80-in., and a 70-in. cylinder pumping engine, each of the finest construction. About 320 hands are now employed, of whom 210 work underground, who are earning from 4l. 10s. to 5l. per month. The bottom of the mine is 248 fathoms below the adit, the adit itself being 30 fathoms from the surface. Hitherto they have only been selling the ores once every other month, but will sell in future every month, and are likely to sample about 300 tons monthly. It is gratifying to hear that, notwithstanding their increased sales, they are increasing their reserves; ore averages 5l. 10s. per ton. It will be remembered that the late Mr. Humphrey Williams bought the concern some years ago for about 10,000l., and after spending a large sum for labour, plant, &c., sold it to a limited capital for about 25,000l. The local agency costs about 40l. per month. Captain William Thomas, of Breage, formerly of Great Wheel Vor, is the manager of the mine, and Mr. Cardozo is the local purchaser. They consume about 600 tons of coal per month, which costs at the present time 19s. 6d. per ton delivered. The best Main Colliery coal is supplied at this price. Their supplies of coal are nearly all delivered from Hayle, at which port they also ship their copper ore. To show the importance of a mine like this in the county, we may state that the monthly wages amount to 1500l., which, paid 13 times a year, distributes a sum of 20,000l. on this one mine for labour alone in the locality. In addition to this, the bills would amount to 800l. per month, or about 10,000l. a year. The importance to the district of keeping such mines as these in full operation will be readily understood, and it is gratifying to find that the Chairman can bring forward such good evidence that it is likely to prove of equal advantage to the shareholders themselves.

As soon as the mines are fairly developed the Chairman considers they might reduce their workmen by 65 in number, at a bi-monthly reduction of at least 520l., and yet leave an exploring staff of 100 men and boys, which by experienced miners would be considered amply sufficient. The moneys expended during the last two months on calciner, dressing-floors, and various things therewith connected, all of which are heavy and exceptional expenditure, amount to 498l. 16s. 4d. These two sums, added together and deducted from present costs, show a deficit of only 35l. 19s. 8d. for the two months' workings, and as we have to meet 13 pay-sheets yearly (of four weeks each), against six bi-monthly sales, it would leave at this rate a present excess of expenditure over income of about 2680l. a year, to meet which an increased output of only 50 tons of copper ore per month would show a surplus, and this is far below our estimated returns of the average of the next 12 months, without taking into consideration any increase of tinstuff, which we are informed is inevitable; but to make the accounts show a profit, instead of a loss, it is absolutely necessary to pay off all existing liabilities, and keep working capital in hand.

To provide the required new capital it is proposed to raise 20,000l., by the issue of 12½ per cent. mortgage debenture bonds of 50l. each, redeemable in three years, and it is confidently thought that if these debentures be subscribed there is every prospect, amounting almost to a certainty, that at the end of six months the mines will be more than self-supporting, and ready to yield a large return to the shareholders for all their money invested, preventing the possibility of their falling into the hands of those who are, doubtless, ready to at once reap the benefits of the large expenditure of more than 143,520l. incurred by the present company. It is the improvements which have been effected by this expenditure that are regarded as giving security to the debentures, and from the statement given of the items of expenditure it is evident that the amount is chiefly represented by work done, and not by excessive payments for purchase; thus the amount spent up to the present time has been—For purchase, 30,000l.; unwatering, 20,000l.; money for development, taken from capital, 50,000l.; money received from the sales of tin and copper, 43,520l. 14s.; total, 143,520l. 14s.; and it is estimated that the additional capital now to be raised will do more than put them into a paying state.

THE LATEST LONDON PURCHASE.—The Manta Mine, near Lincoln, Placer county, California, is one of the very few American mines which have lately been placed on the English market. The company owning the property is known as the Manta Mining Company (Limited), London. There is a five-stamp mill on the mine and five more stamps are being added by the English owners. They are also putting in a pump, hoisting work, &c. There is a shaft on the mine 240 ft. deep, and three levels have been run. The ledge is a gold-bearing one, about 2 feet wide. We are told that the ore is very similar in appearance to that of the Idaho and Eureka Mines, in Grass Valley, in both the characteristics of the vein stuff and the mode of occurrence, but not having seen it are unable to speak of our own knowledge. The vein at the bottom of the shaft is 4½ ft. wide, although it only shows 11 in. at the surface. The rock is said to be very uniform in its pay value, and is expected to work about 340 per ton. This mine was placed in the English market for the sum of 50,000l., and if it is worth anything at all ought to pay a decent dividend on the comparatively small capital stock. It is to be hoped that the mine will be made to pay, for our English friends have been bitten so badly of late that they deserve some recompense. California is in better repute there than most of the Pacific States and Territories, and if a few small mines were successful, it would lead the English public to invest largely here.—*Mining and Scientific Press*, San Francisco, Dec. 6.

PREVENTION OF SMOKE.—The invention of Mr. GEORGE NIMMO, of Glasgow, consists in making the front part of the hearths of furnaces with an opening, or set of openings, up through from the underside or front part of the ashpit, and fitting the same with a hinged door, or doors, for regulating the admission of air, and preferably with a counter-balancing weight or spring acting in the one direction to retain them where set, or shift them gradually close after being set open by a water or other regulator.

HOLLOWAY'S PILLS—HALE CONSTITUTION.—When the human frame has become debilitated from the effects of exposure, excesses, or neglect, these pills will repair the mischief if they be taken according to the directions wrapped round each box. Holloway's pills exert the most exemplary tonic qualities in all cases of nervous depression, whereby the vital powers are weakened, and the circulation is rendered languid and unsteady. They improve the appetite, strengthen the digestion, regulate the liver, and act as gentle aperients. These pills are suited to all ages, and all habits, and their inventor's fame has resounded through all the quarters of the globe; wherever sickness exists this medicine has made its way to be everywhere largely approved and justly appreciated.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the TERRA TIN MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 13th day of December last, presented to the Vice-Warden of the Stannaries by David Wise Bain, of Portreath, within the said Stannaries, Coal Merchant, claiming to be a creditor of the said company, and that the said petition is directed to be heard before the Vice Warden, at the Law Institution, Chancery-lane, in the City of London, on Tuesday, the 5th day of January next, at half-past Twelve o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or his agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro. Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, his solicitor, or his agents, within 24 hours after requiring the same, on payment of the regulated charge per folio. Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 2nd day of January next, and notice thereof must at the same time be given to the petitioner, his solicitors, or his agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Agents for S. T. G. Downing, Redruth, Solicitor for the Petitioner).
Dated Truro, 16th December, 1874.

VALUABLE IRON, TIN, AND COPPER MINES IN WEST CORNWALL FOR SALE.

MR. JOHN MATHEWS WILL SELL, BY AUCTION, at the Western Hotel, Penzance, on Thursday, the 31st day of December next, at Three o'clock in the afternoon, in One Lot, as a going concern, the WHOLE of the MACHINERY and MATERIALS, together with the SEVERAL MINING LEASES or SETTS of the TREBARVAH MINES, situate in the parish of Perranuthnoe, near Marazion.

The MACHINERY comprises the following, namely:—48½ in. cylinder, 7 ft. stroke PUMPING ENGINE, with 12 ton BOILER; 16 in. cylinder, 4 ft. stroke STEAM WHIM, with 8 ton BOILER; cage and wire-rope complete; shears and capstan, with wire-rope; 50 fms. 14 in. pitwork, and 15 fms. 7 in. in engine-shaft, with 10 fms. 12 in. pitwork in Richards' shaft, with 40 fms. flat-rods underground and 12 fms. 13 in. pumps at surface; skip-rod in Richards' shaft, with stands, shovels, and shaft ladders at surface, together with a variety of miscellaneous articles. There is also an excellent account-house, together with smiths' shop and carpenters' shop, as well as material, powder, and dressing houses, with extensive copper ore floors.

The whole of the machinery is in first rate condition, and ready to be set to work at once. The various levels from the adit to the 60 have been cleared, and 117 tons of copper ore, 1300 tons of white sparose iron ore, and 298 tons of tinstuff have been raised to surface and sold. There is a good lode of copper ore new standing above the 60, west of Richards' shaft, and copper may also be expected in the 50 by driving a few fathoms further west of engine-shaft. There are several other valuable lodes known to exist in the sett.

Any further information may be obtained from Messrs. BRANSON and SOX, Solicitors, Sheffield; Mr. S. H. F. Cox, St. Columb; or of the Auctioneer; or at the offices of Mr. W. TRYBELL, Solicitor, Penzance.

Dated 16th November, 1874.

TO COPPER ORE AND OTHER MERCHANTS.

MR. JOHN M. LEEDER has been instructed by the Executors of the late William Meager, deceased, TO SELL, BY PUBLIC AUCTION, on Thursday, the 7th day of January, 1875, at the Mackworth Arms Hotel, Wind-street, Swansea (subject to conditions which will be read at the time of sale), all that most VALUABLE LEASEHOLD PROPERTY, known as the

CORRE WHARF.

NORTH DOCKS, SWANSEA, together with NINE COTTAGES erected thereon, and held for an unexpired term of 99 years, and lives, from the 25th day of December, 1824, at a yearly rent of £30.

The property comprised in the lease has a depth of 305 ft., with a quay frontage to the North Dock of 120 ft., and with a frontage on the east side of 80 ft., with other great advantages.

A small portion of the yard, on which five of the cottages are erected, is subject to a lease granted to Mrs. Sarah Meager, for a term of 99 years, from the 25th day of March, 1833, at the nominal rent of £4 per annum, and which property is now in the possession of the said executors, Mrs. S. Meager having let to the said W. Meager for 40 years, from the 25th day of March, 1841, at the yearly rent of £25.

The whole of the property is underlet to Messrs. Walter Shairp and Alexander Bruce (subject to the before-mentioned leases), for an unexpired term of 4½ years, from the 25th March, 1841, at the very low rent of £250. The premises are now in the occupation of Messrs. Richardson and Co.

Sale to take place at Three o'clock in the afternoon. For further particulars, apply to Messrs. BROWN and COLLINS, Solicitors, Worcester place, Swansea; or to the Auctioneer, Oxford Chambers, Swansea.

FREEHOLD ESTATE AND HEMATITE IRON MINES, at PARKSIDE, FRIZINGTON, CUMBERLAND.

TO BE SOLD, BY PUBLIC AUCTION, at the Albion Hotel, King-street, Whitehaven, in the county of Cumberland, on Wednesday, the 27th day of January, 1875, at Three o'clock in the afternoon, all the ancient enclosed portions of the FREEHOLD ESTATE called PARKSIDE, in the township of Frizington, in the parish of Arlecdon, in the county of Cumberland, containing 19A. 2R. 22P. or thereabouts, now in the occupation of Mr. George Graham, as farmer; together with the valuable MINES and ROYALTIES of HEMATITE IRON ORE and LIMESTONE within and under the same, being portions of the mines known as

THE PARKSIDE MINES,

now in the occupation of the Parkside Mining Company, under a lease thereof, which will expire on the 24th day of June next.

These well-known and productive mines have been successfully worked by the present lessees for 30 years and upwards, and are still producing large quantities of the best Cumberland hematite ore. The royalty is surrounded by some of the most valuable iron mines in the district, and has only been partially explored, and affords an excellent opportunity for the profitable investment of capital.

The allotments of common belonging to the estate adjoining the Frizington Road, and containing 4A. 3R. 4P., are not included in the present sale.

The farmer will show the land for absolute sale in the usual way, but if not sold will then be offered on a lease for 1000 years, subject to royalty rents of 2s. per ton for all iron ore, and 2d. per ton for all limestone to be worked out of the estate. The person offering the highest premium to be the lessee.

Conditions will be produced at the sale; and, in the meantime, further information may be had on application to Messrs. WILLIAM and ISAAC PORTER, Egremont; JOSEPH PORTER, Whitehaven; or at the offices of Messrs. LUMB and HOWSON, Whitehaven, where a plan of the property may be seen, and copy of conditions had before the sale.

JOHN FARQUHARSON, Auctioneer.

TO CAPITALISTS.

FOR SALE, IN NEW SOUTH WALES, —

1340 ACRES TIN LANDS, Lode and Stream.

2450 ACRES COPPER LANDS (portions freehold).

2112 ACRES IRON AND COAL (on sea coast).

2250 ACRES COAL (on sea coast).

4000 ACRES COAL (inland, on railway line).

200 ACRES KEROSENE SHALE.

200 ACRES PLUMBAGO.

105 ACRES FREEHOLD GOLD DEPOSIT (Brown's Creek).

The above properties are all first-class, and on or near railway lines or water carriage, and are the very "pick" of their respective districts (being some of the first selections made).

Liberal terms, either as to purchase or working on royalty, will be given to parties able to carry out arrangements. Apply to the owner, —

CHARLES W. WEEKES, Circular Quay, Sydney, N.S.W.

CORNISH ENGINES.

FOR SALE: —

ONE excellent 70 in. CORNISH PUMPING ENGINE, 10 ft. stroke, with metallic piston, with or without three boilers, 13 tons each, with fittings.

ONE good 72 in. CORNISH BEAM ENGINE, 10 ft. stroke, with inverted cylinder.

ONE superior 50 in. CORNISH PUMPING ENGINE, 10 ft. stroke.

ONE first-class 28 in. WINDING ENGINE, 6 ft. stroke, suitable for a colliery, with drum.

ONE very good 20 in. horizontal WINDING ENGINE, 10 ft. stroke.

PUMPWORK of all sizes; CORNISH CRUSHERS; BOILERS from 6 to 12 tons; and a LARGE STOCK of MATERIALS in general use in mines.

Apply to F. W. MICHELL and Co., Mine Material Depot, East Carn Brea, Redruth, Cornwall.

MINING MACHINERY AND MATERIALS FOR SALE, comprising STEAM ENGINES, WATER WHEELS, PITWORK, and other MINE MATERIAL. — Apply to —

W. TREGAY, REDRUTH.

TWO HUNDRED horse power indicated BEAM STEAM ENGINE FOR SALE, SECOND-HAND.

Can be seen working on application to GEORGE LEACH and Co., Britannia Works, near the Railway Terminus, Leeds.

Is being sold to make room for an engine of greater power. Stroke, 7 ft., cylinder jacketed, D valves, fly-wheel 28 ft. diameter, 16 tons. Total weight about 50 tons. Ashlar foundations will be sold with engine.

FOR SALE, a HORIZONTAL HIGH-PRESSURE ENGINE.

13½ in. cylinder, 24 in. stroke; HORIZONTAL HIGH-PRESSURE ENGINE, 14 in. cylinder, 30 in. stroke; and a PAIR of GUN-METAL PUMPS, 6 in. diameter, 12 in. stroke; also, a TUBULAR BOILER, up to 60-horse power, of Yorkshire plates throughout.

Apply to W. T. HENDRY and Co., 2, Wilson street, London E.C.

FOR SALE, CORNISH ROTARY ENGINE, 38 in. cylinder, two fly wheels, about 20 tons; TWO BOILERS, 20 tons; THREE STAMPS AXLES, five cambs to the round, two sets complete, with lifters, &c., for stamping. To be sold together or separately. Apply to Mr. HOWARD, Auctioneer, St. Columb, Cornwall.

CONTRACT FOR ENGLISH ELM TIMBER. CONTRACT DEPARTMENT, ADMIRALTY, WHITEHALL, S.W., December 18th, 1874.

TENDERS will be RECEIVED on THURSDAY, 7th January, 1875, until Two o'clock, for ONE THOUSAND NINE HUNDRED LOADS OF ENGLISH ELM TIMBER. Their Lordships do not bind themselves to accept the lowest or any tender. A Form of Tender, containing all particulars, may be obtained at this office. FRANCIS W. ROWSELL, Superintendent of Contracts.

GIRVAN AND PORT PATRICK JUNCTION RAILWAY.

THE DIRECTORS are prepared to RECEIVE TENDERS for the following PERMANENT-WAY MATERIALS (Terms cash): — RAILS, about 2000 tons, and proportionate quantities of CHAIRS, FISH-PLATES, BOLTS, and SPIKES, to be delivered in equal quantities on 1st April 1st May next. The particulars may be obtained from JOHN MACRAE, Esq., C.E., 107, Princess-street, Edinburgh, and sealed tenders are to be forwarded to HUGH MACLEAN, Solicitor, Stranraer, the solicitor of the company, on or before the 2nd day of January, 1875.

The directors do not undertake to accept the lowest or any tender. Office of the company, Stranraer, Dec. 18, 1874.

AN ENGINEERING FIRM of standing are prepared to APPOINT suitable FIRMS, of influence and position, to SELL PORTABLE, VERTICAL, and HORIZONTAL STEAM ENGINES and BOILERS, MORTAR MILLS, BAND SAWS, and all descriptions of AGRICULTURAL, MINING, ENGINEERING, and RAILWAY IMPLEMENTS and PLANT. Prices, &c., are such as to command a large and satisfactory trade. Exclusive districts will be conceded, and liberal terms allowed. Address, "S. G.," MINING JOURNAL Office, 26, Fleet-street, London.

WANTED, a 30 to 40-horse power SECOND-HAND horizontal STEAM ENGINE, in good repair. Also a suitable CORNISH BOILER (Galloway's preferred). Apply, stating lowest price and all particulars, to Messrs. BARFORD and PEEKING, Queen-street Ironworks, Peterborough.

WANTED, — WATER-WHEEL, with Iron Ring, Sockets, and Axles, from 27 to 50 feet diameter, and from 2½ to 7 feet breadth. Full particulars, with price, to be sent to E. STOCKER, St. Austell.

TIN MINES, PLANT, MACHINERY, &c. — The Advertiser having purchased the LEASE of certain properties in Cornwall, for the purpose of raising Hematite Ore, wishes to DISPOSE OF TWO TIN MINES, adjoining each other on the same, as a going concern, on very favourable terms, with 30 in. cylinder PORTABLE ENGINE, 10 ton BOILER, TIN HOUSE, STAMPS, and all other MACHINERY complete. Price £3000. For full particulars and orders to view, address "Beta," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

IRONSTONE, — ABOUT TWO HUNDRED AND NINETY ACRES may be LEASED, or probably PURCHASED at once. No agents need apply. For particulars, write to Miss PEIRSON, Pickering.

PIT SINKING AND WINDING COAL.

FOR SALE, and ready for immediate delivery, a 14, 18, 25, and 35 horse power PORTABLE STEAM ENGINES, with link motion, reversing gear, winding drum, &c., complete. Also, a 9 and 18 horse power VERTICAL ENGINES, with link motion reversing gear, suitable for mining operations. **FOR SALE, — An excellent PORTABLE STEAM ENGINE; and a 7-ft. PAN MORTAR MILL.** Apply to —

BARROWS AND STEWARTS, ENGINEERS, BANBURY.

ON SALE, — MASSIVE CRUSHING MILL, with two pairs of 24-in. rolls, in cast metal frames. Also, 250 yards of 1½ in. diameter IRON WIRE WINDING ROPE. Address, "X. Y. Z.," MINING JOURNAL Office, 26, Fleet-street, London.

ON SALE, TWO CORNISH BOILERS, 30 ft. by 7 ft. diameter. Two flues through each. Safe at 60 lbs. pressure working. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 18 in. high pressure HORIZONTAL ENGINES, for winding, fitted with slot link motion. First-class pair of engines. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 15 in. HORIZONTAL WINDING ENGINES, with slot link motion. Will be sold cheap. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE 25-horse power double cylinder PORTABLE ENGINE, fitted with slot link motion for winding. ONE 20 horse power double cylinder PORTABLE ENGINE. Will be sold cheap, and are in first-class order. Apply to HENRY PARKINSON, Foundry-street Boiler Works, Bolton, Lancashire.

ON SALE, ONE 8-horse power PORTABLE ENGINE, fitted up with winding drum; slot link motion; made by Clayton and Shuttleworth. Price £130. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 25-in. coupled HORIZONTAL WINDING ENGINES, with drums and brake gear. Also, ONE PAIR of 22 in. ditto. Will be sold cheap. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE STRONG WELL-BUILT CONDENSING BEAM ENGINE, by a first-class maker, equal to new; cylinder, 36 in. bore, 5 ft. stroke. Can be seen standing, and will be sold cheap. ONE close-built self-contained CONDENSING BEAM ENGINE, stands on independent bed on six columns; cylinder, 28 in. bore, 4 ft. stroke. As good as new. Can be seen standing, and will be sold cheap. Apply to HENRY PARKINSON, Foundry-street, Bolton.

BOILERS ON SALE. — FOUR GALLOWAY'S PATENT BOILERS, 30 ft. by 7 ft., safe to work at 70 lbs. on the square inch. TWO BOILERS, 28 ft. by 7 ft., with two flues through. TWO BOILERS, 28 ft. by 7 ft., with two flues through. ONE BOILER, 30 ft. by 7 ft., two flues through. ONE BOILER, 18 ft. by 6 ft. one flue through. Also, several smaller sizes. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE 16-horse power double cylinder PORTABLE ENGINE, for winding. ONE 12-horse power PORTABLE ENGINE. ONE 10 horse power PORTABLE ENGINE. ONE 8 horse power PORTABLE ENGINE. ONE 6-horse power PORTABLE ENGINE. Equal to new, and will be sold cheap. Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 25-in. HORIZONTAL WINDING ENGINES. ONE PAIR of 18 in. HORIZONTAL WINDING ENGINES. ONE PAIR of 16 in. HORIZONTAL WINDING ENGINES. ONE PAIR of 15 in. HORIZONTAL WINDING ENGINES. ONE PAIR of 12 in. HORIZONTAL WINDING ENGINES. ONE PAIR of 10 in. HORIZONTAL WINDING ENGINES. ONE PAIR of 7 in. HORIZONTAL WINDING ENGINES. The above engines are now ready for delivery, and fitted with winding drums and brake gear to each pair of engines. Apply to HENRY PARKINSON, Foundry-street, Bolton.

Crown Soc., 3s. 6d.

AIR AS FUEL: OR PETROLEUM AND OTHER MINERAL OILS UTILISED BY CARBURISING AIR, and RENDERING IT INFLAMMABLE.

By OWEN C. D. ROSS, M.Inst.C.E.

London: E. and F. N. SPON, 48, Charing Cross.

New York: 446, Broome-street.

THE "LONDON IRON TRADE EXCHANGE." THE DOUBLE CHRISTMAS NUMBER of the "London Iron Trade Exchange" will be published on Saturday, the 2nd of January, price 1s. This double number will contain no less than 60 high-class engravings of noted ironworks and specialities in machinery.

The engravings of ironworks will include — The Barrow Steel Company's Works. The Earl of Dudley's Works. Earl Granville's Works, both in Shropshire and Staffordshire. Phillip Williams and Son's Wednesbury Oak Works. E. P. and W. Baldwin's famous Tin-Plate Works. John Knight and Co.'s, of Cookley, noted Tin-Plate Works. The celebrated Bowling Ironworks, of Bradford. Robert Heath and Son's Norton Ironworks. W. Millington and Co.'s Summerhill Works. The great Bloomfield Ironworks. Lee and Bolton's Hyde Works. The Lillieshall Company's Phoenix Engine Factory.

With the engravings of 40 to 50 other ironworks in the United Kingdom. Besides the usual matter, this number will contain Mr. GRIFFITHS'S Review of the Iron Trade of 1872, 1873, and 1874.

Orders for this number may be sent to the office, 84, Cannon-street, London; or given to W. H. SMITH and Son, of the Strand, at any of their Bookstalls at the Railway Stations throughout the United Kingdom.

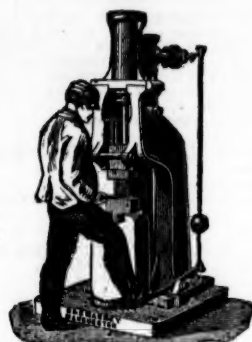
To save trouble and expense, a remittance of 1s. must be made with orders sent direct to the Publishing Office.

Advertisements for this Special Number must be sent to the office, 84, Cannon-street, immediately.

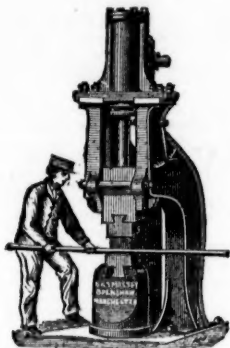
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS AWARDED:—Paris, 1867 Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

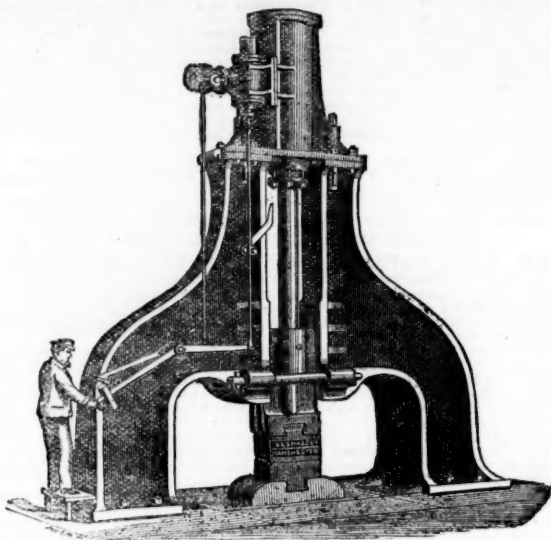
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



Small Hammer with Foot Motion.



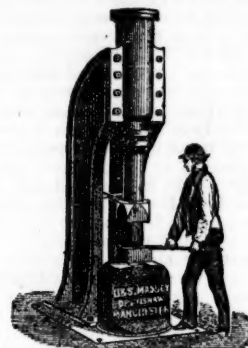
General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.



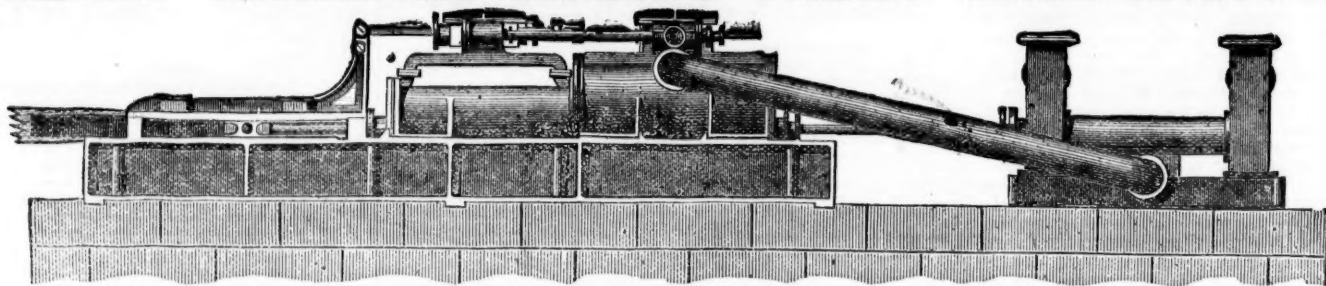
General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c.

STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks, breaking Pig-iron, &c.

HATHORN, DAVIES, CAMPBELL, AND DAVEY, MAKERS OF THE COMPOUND DIFFERENTIAL EXPANSIVE PUMPING ENGINE—DAVEY'S PATENT.



Also, Single-cylinder Condensing Differential PUMPING ENGINES; Steam Pumps, of various kinds; Hydraulic Pumps, for dip workings; Winding Engines; Compound Rotative Engines; the Separate Condenser; High and Low Pressure Steam Boilers, &c.

SUN FOUNDRY, LEEDS.

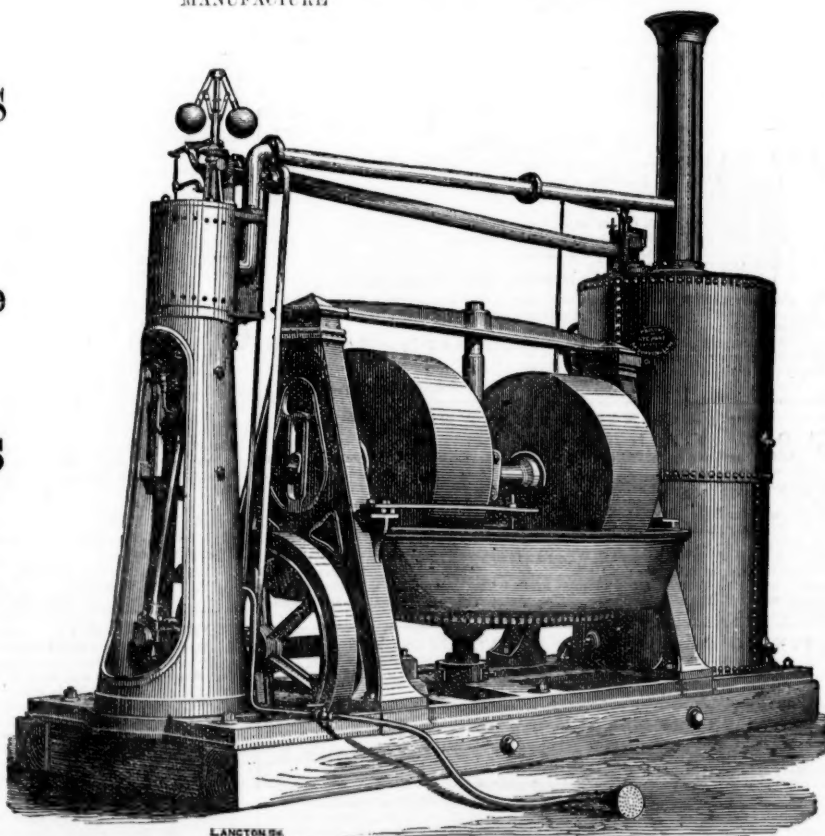
FURTHER PARTICULARS ON APPLICATION.

BARROWS & STEWART, ENGINEERS, BANBURY, MANUFACTURE

PORTABLE Steam Engines

With Gear for
Winding,
Pumping, and Ore
Crushing.

ALSO,
COMBINED MILLS
and ENGINES,
with or without
BOILERS,
for Grinding
Cinders, Sand,
Mortar, &c.



LANCASHIRE

ST. LAWRENCE ROPEWORKS, NEWCASTLE-ON-TYNE.

ESTABLISHED 1782.

THOMAS AND WILLIAM SMITH,

Manufacturers of all kinds of Iron, Steel, Copper, and Galvanised Wire Ropes, Hemp and Manilla Ropes, &c., Round and Flat Shaft Ropes, Crab Ropes, Guide Ropes, Hauling Ropes, and Galvanised Signal Strand, Ships' standing Rigging fitted complete, Patent Hemp and Manilla Hawseers, Warps, Cordage, Spun yarn, &c., &c., Manilla Yarn for Telegraph Cables, &c., Flat Hemp Ropes for Driving Bands, Steel Plough Ropes, Fencing Wire and Strand, Lightning Conductors, &c.

OFFICES: 1, QUEEN STREET, NEWCASTLE-ON-TYNE; DOCKYARD, NORTH SHIELDS;

1, CROSBY SQUARE, LONDON, E.C.

STORES: DOCKYARD, NORTH SHIELDS; QUAYSIDE, NEWCASTLE; NEW MARKET, SOUTH SHIELDS;

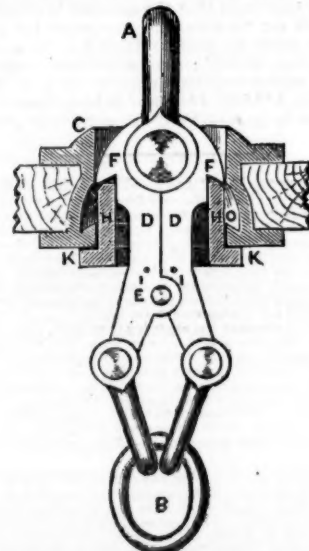
THE PHOSPHOR BRONZE COMPANY (LIMITED).



OFFICES:
110, CANNON STREET, E.C.
FOUNDRY:
115, BLACKFRIARS ROAD, S.E.

INGOTS, Nos. I and II, suitable for Pumps, Pinions, Ornamental Castings, &c. £130 per ton
Nos. VI and VII, suitable for Valves, Plungers, Bushes and Bearings, Fans, &c. £145 per ton
Special Phosphor Bronze Bearing Metal £120 per ton
CASTINGS, Wire Ropes, Tuyeres, &c., of all descriptions executed at the shortest notice.

OVERWINDING IMPOSSIBLE. WALKER'S DETACHING HOOK, FOR COLLIERIES AND BLAST-FURNACE HOISTS.



SIX LIVES SAVED.

Walker's Hook, at Tockett's sinking, has saved six men's lives. On the 6th instant, the kibble was overwound, and but for the hook would have fallen down the pit, where six men were working, 120 ft. below, all of whom would probably have been killed. Thanks, however, to Mr. Walker's invention, the rope alone passed harmlessly over, the kibble remained suspended, and in half-an-hour everything was working as if nothing had occurred.—From the Northern Echo August 20, 1874.

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Is the CHEAPEST and MOST POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

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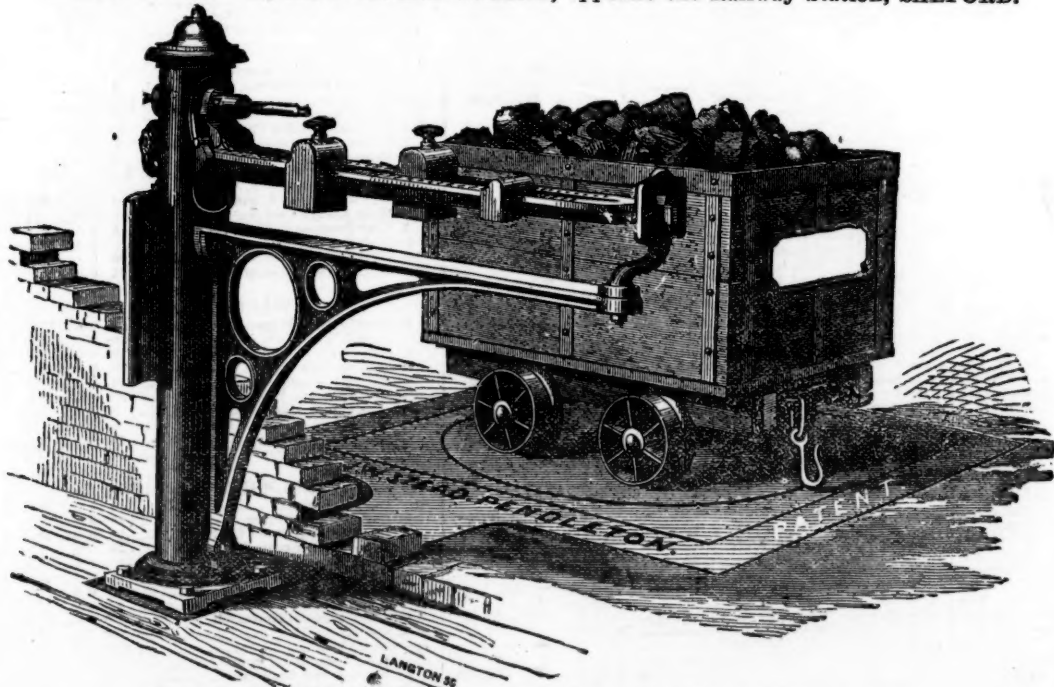
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Total bonuses declared to 1868 inclusive 2,855,415

Total expenditure 6 per cent. on total income for last five years

Bonus, 1874.—Cash profits declared £ 353,053

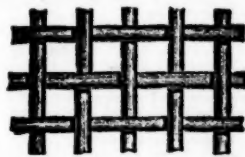
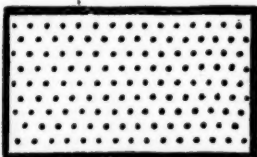
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Shares.	Mines.	Divid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid.
1600 Alderley Edge, c, Cheshire	10 0 0	5 5 5	5 5 5	5 5 5	12 1 8	0 5 0	Apr. 1874
30000 Bampfylde, c, Devon	1 0 0	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	June 1873
6000 Bisen Caelan, c, Cardigan (24 sh.)	3 10 0	5 5 5	5 5 5	5 5 5	0 10 9	0 10 9	Aug. 1872
200 Balfall, c, St. Just	116 5 0	5 5 5	5 5 5	5 5 5	619 15 0	5 0 0	Aug. 1872
10000 Bannockburn, c, Cardigan	1 7 6	5 5 5	5 5 5	5 5 5	2 3 0	0 0 0	Aug. 1872
4000 Brockwood, c, Buckfastleigh	1 16 0	5 5 5	5 5 5	5 5 5	3 2 6	0 0 0	Nov. 1874
3445 Cargill, c, Newlyn	2 10 0	5 5 5	5 5 5	5 5 5	4 16 3	0 12 6	Oct. 1872
4000 Cashwell, c, Cumberland	2 10 0	5 5 5	5 5 5	5 5 5	3 0 0	0 2 6	Aug. 1873
10000 Carr Brea, c, Illogan	35 0 0	5 5 5	5 5 5	5 5 5	368 0 0	0 7 6	June 1873
6000 Cath. & Jane, c, Penrynendrenath	5 0 0	5 5 5	5 5 5	5 5 5	11 17 0	0 0 0	June 1873
2450 Cook's Kitchen, c, Illogan	20 4 9	5 5 5	5 5 5	5 5 5	116 10 0	0 12 0	May 1872
10240 Devon Gr. Consols, c, Tavistock	1 0 0	5 5 5	5 5 5	5 5 5	105 16 8	0 13 6	Dec. 1874
4296 Dolcoath, c, Camborne	10 14 10	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	July 1874
10000 Drake Lacey, c, Calstock	5 0 0	5 5 5	5 5 5	5 5 5	0 2 11	0 0 0	Feb. 1874
10000 East Bawden, c, Sancreed	1 0 0	5 5 5	5 5 5	5 5 5	224 10 0	0 1 0	Oct. 1874
6144 East Caradon, c, St. Clerf	2 14 0	5 5 5	5 5 5	5 5 5	13 11 3	0 0 0	Oct. 1874
800 East Darren, c, Cardiganshire	32 0 0	5 5 5	5 5 5	5 5 5	20 7 0	0 7 0	Oct. 1874
6400 East Pool, c, Illogan	0 9 9	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	May 1873
1906 East Wheel Lovell, c, Wendron	5 19 0	5 5 5	5 5 5	5 5 5	80 15 0	0 10 0	Sept. 1872
5000 Exmouth, c, Christow	0 7 6	5 5 5	5 5 5	5 5 5	0 5 10	0 1 0	Aug. 1874
4000 Foxdale, c, Isle of Man	25 0 0	5 5 5	5 5 5	5 5 5	17 3 0	0 0 0	Oct. 1874
40000 Glasgow Carr, c, (30,000 £1 p., 10,000 15s. p.)	1 1 1	5 5 5	5 5 5	5 5 5	15 19 0	0 2 0	Oct. 1874
10000 Great Lacey, c, Isle of Man	4 0 0	5 5 5	5 5 5	5 5 5	15 19 0	0 2 0	June 1872
20000 Great West Van, c, Cardigan	2 0 0	5 5 5	5 5 5	5 5 5	12 0 0	0 4 0	Oct. 1874
8000 Great Wheel Vor, c, Helston	40 15 0	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	Nov. 1874
4000 Green Hurth, c, Durham	0 6 0	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	Dec. 1874
20000 Grogwinlon, c, Cardigan	2 0 0	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	Nov. 1874
10240 Gwunialla (Clitters), c, c	5 0 0	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	Nov. 1874
1024 Herodotus, c, near Liskeard	8 10 0	5 5 5	5 5 5	5 5 5	62 5 0	0 15 0	Oct. 1872
18000 Hington Downs, c, Calstock (21 sh.)	32 0 0	5 5 5	5 5 5	5 5 5	4 3 0	0 0 0	Dec. 1872
25000 Killalee, c, Tipperary	1 0 0	5 5 5	5 5 5	5 5 5	0 3 11 4	0 0 6	May 1873
400 Lisburne, c, Cardiganshire	18 15 0	5 5 5	5 5 5	5 5 5	664 10 0	0 1 0	July 1874
8120 Lovell, c, Wendron	0 10 0	5 5 5	5 5 5	5 5 5	0 17 6	0 1 6	Jan. 1874
11000 Melindur Valley, c, Cardigan	3 0 0	5 5 5	5 5 5	5 5 5	0 3 7 0	0 3 7 0	June 1874
9000 Miners Mining Co., c, Wrexham	5 0 0	5 5 5	5 5 5	5 5 5	63 15 0	0 2 0	Nov. 1872
20000 Mining Co. of Ireland, c, c	7 0 0	5 5 5	5 5 5	5 5 5	0 8 0	0 8 0	July 1872
12000 North Hendre, c, Wale	2 10 0	5 5 5	5 5 5	5 5 5	0 17 6	0 2 6	Oct. 1874
2000 North Levant, c, c, St. Just	12 2 0	5 5 5	5 5 5	5 5 5	4 13 0	0 12 0	Sept. 1873
7000 Old Trebargett, c, c, ordinary shares	1 0 0	5 5 5	5 5 5	5 5 5	0 0 0	0 0 0	Feb. 1874
9000 Old Trebargett, c, c, 10 per cent. pref.	1 0 0	5 5 5	5 5 5	5 5 5	0 0 10 6	0 0 10 6	Feb. 1874
8000 Pedn-ar-dra, c, Redruth	9 2 0	5 5 5	5 5 5	5 5 5	0 0 0	0 0 0	Nov. 1871
8000 Penballa, c, St. Agnes	3 0 0	5 5 5	5 5 5	5 5 5	0 0 0	0 0 0	Oct. 1874
5000 Penrithal, c, c, Gwennap	2 0 0	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	Nov. 1874
8000 Phoenix, c, c, Linkinhorne	4 13 4	5 5 5	5 5 5	5 5 5	39 19 0	0 4 0	Nov. 1872
1772 Polberr, c, St. Agnes	15 0 0	5 5 5	5 5 5	5 5 5	1 12 6	0 6 0	Mar. 1872
18000 Prince Patrick, c, c, Holywell	1 0 0	5 5 5	5 5 5	5 5 5	0 9 0	0 0 0	Jan. 1875
1130 Providence, c, Lelant	16 16 7	5 5 5	5 5 5	5 5 5	104 12 0	0 10 0	Sept. 1872
2000 Queens, c, c, Holywell	2 0 0	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	Sept. 1874
12000 Roman Gravel, c, c	7 10 0	5 5 5	5 5 5	5 5 5	4 10 0	0 8 0	Dec. 1874
10000 Shelton, c, c, St. Austell	2 0 0	5 5 5	5 5 5	5 5 5	1 1 0	0 1 0	Feb. 1872
512 South Caradon, c, St. Clerf	1 15 0	5 5 5	5 5 5	5 5 5	717 0 0	0 0 0	Oct. 1872
8000 South Carn Brea, c, c, Illogan	1 17 6	5 5 5	5 5 5	5 5 5	0 10 0	0 0 0	July 1872
8000 South Darren, c, Cardigan	3 6 6	5 5 5	5 5 5	5 5 5	1 1 0	0 1 0	Nov. 1874
10000 St. Pr. Patrick, c, c, (8000 sh. issued)	1 0 0	5 5 5	5 5 5	5 5 5	0 2 0	0 2 0	Oct. 1874
8771 St. Just Amalgamated, c, c	3 10 0	5 5 5	5 5 5	5 5 5	0 9 0	0 4 0	Nov. 1871
12000 Tankerville, c, c, Salop	6 0 0	5 5 5	5 5 5	5 5 5	3 8 0	0 0 0	Feb. 1872
6000 Tincroft, c, c, Pool, Illogan	9 0 0	5 5 5	5 5 5	5 5 5	47 12 0	0 6 0	Nov. 1874
18000 Tretol, c, c, Bodmin	2 0 0	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	Mar. 1874
4000 Trumpet Consols, c, Helston	7 10 0	5 5 5	5 5 5	5 5 5	9 11 0	0 10 0	Nov. 1872
15000 Van, c, c, Llanidloes	4 5 0	5 5 5	5 5 5	5 5 5	13 9 0	0 10 0	Oct. 1874
8000 W. Chiverton, c, c, Perranzabuloe	10 10 0	5 5 5	5 5 5	5 5 5	82 10 0	0 8 0	Oct. 1873
612 West Tolgus, c, Redruth	98 0 0	5 5 5	5 5 5	5 5 5	3 10 0	0 8 0	Dec. 1874
2048 West Wheel Frances, c, Illogan	27 9 0	5 5 5	5 5 5	5 5 5	3 10 0	0 8 0	Oct. 1872
512 Wheel Basset, c, Illogan	5 2 6	5 5 5	5 5 5	5 5 5	638 10 0	0 10 0	Aug. 1872
2048 Wheel Jane, c, Kea	2 13 0	5 5 5	5 5 5	5 5 5	11 0 0	0 1 0	Oct. 1874
4296 Wheel Kitty, c, St. Agnes	5 4 6	5 5 5	5 5 5	5 5 5	11 19 0	0 2 6	Dec. 1874
806 Wheel Margaret, c, c, Uny Lelant	15 17 6	5 5 5	5 5 5	5 5 5	82 2 0	0 3 0	May 1872
80 Wheel Owles, c, St. Just	76 5 0	5 5 5	5 5 5	5 5 5	522 10 0	0 4 0	Aug. 1872
6000 Wheel Russell, c, c, Tavistock	2 0 0	5 5 5	5 5 5	5 5 5	0 1 0	0 1 0	Dec. 1874
12000 Wheel Whistler, c, c, Warleggan	1 0 0	5 5 5	5 5 5	5 5 5	0 3 0	0 6 0	Nov. 1874
10000 Wheel Whistler, c, c, Warleggan	1 0 0	5 5 5	5 5 5	5 5 5	0 1 0	0 6 0	May 1873
8000 Wicklow, c, c, c, Wicklow	2 10 0	5 5 5	5 5 5	5 5 5	52 9 0	0 2 6	Mar. 1872

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Divid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid.
35500 Alamillos, c, Spain	3 0 0	5 5 5	5 5 5	5 5 5	1 5 9 0	0 2 0	Sept. 1874
30000 Almaden and Tiroto Consols	1 0 0	5 5 5	5 5 5	5 5 5	0 1 5 0	0 1 0	May 1873
20000 Australian, c, South Australia	7 7 6	5 5 5	5 5 5	5 5 5	0 12 6	0 2 0	July 1873
10000 Battle Mountain, c, (6240 part pd.)	5 0 0	5 5 5	5 5 5	5 5 5	0 10 0	0 10 0	July 1872
16000 Bideyee Creek, c, California	4 0 0	5 5 5	5 5 5	5 5 5	0 14 0	0 2 6	June 1873
6000 Bunsberg, c, Germany	10 0 0	5 5 5	5 5 5	5 5 5	0 17 4	0 8 0	Oct. 1873
12520 Burras, c, c, So. Australia	5 0 0	5 5 5	5 5 5	5 5 5	56 0 0	0 10 0	Oct. 1872
40000 Cane Copper Mining, c, So. Africa	7 0 0	5 5 5	5 5 5	5 5 5	15 15 0	0 1 0	Dec. 1874
40000 Cedar Creek, c, California							